21884

National Library of Canada | Bibliothèque nationale du Canada

CANADIAN THESES ON MICROFICHE | THÈSES CANADIENNES SUR MICROFICHE

NAME OF AUTHOR/*NOM DE L'AUTEUR* STEPHEN PAUL MARTIN

TITLE OF THESIS/*TITRE DE LA THÈSE* SELECTED ASPECTS OF THE ECONOMIC RELATIONSHIP BETWEEN CONSUMERS AND COMMERCIAL RIVERS: A CASE STUDY OF WHYTE AVE / EDMONTON

UNIVERSITY/*UNIVERSITÉ* UNIVERSITY OF ALBERTA

DEGREE FOR WHICH THESIS WAS PRESENTED/*GRADE POUR LEQUEL CETTE THÈSE FUT PRÉSENTÉE* M A

YEAR THIS DEGREE CONFERRED/*ANNÉE D'OBTENTION DE CE DEGRÉ* 1976

NAME OF SUPERVISOR/*NOM DU DIRECTEUR DE THÈSE* DR D B JOHNSON

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

DATED/*DATÉ* 30th July 1976 SIGNED/*SIGNÉ* S. P. Martin

PERMANENT ADDRESS/*RÉSIDENCE FIXÉ* #59 - 9915 Bellamy Hill RD
EDMONTON
ALBERTA

NL-91 (11-73)

THE UNIVERSITY OF ALBERTA

SELECTED ASPECTS OF THE FUNCTIONAL RELATIONSHIP BETWEEN CONSUMERS AND COMMERCIAL RIBBONS: A CASE STUDY OF WHYTE AVENUE, EDMONTON

by

© STEPHEN PAUL MARTIN

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
AND RESEARCH IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

DEPARTMENT OF GEOGRAPHY

EDMONTON, ALBERTA

FALL, 1974

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled Selected Aspects of the Functional Relationship Between Consumers and Commercial Ribbons: A Case Study of Whyte Avenue, Edmonton submitted by Stephen Paul Martin in partial fulfilment of the requirements for the degree of Master of Arts.

.....
Supervisor

.....

.....

Date July 29, 1974...

ABSTRACT

A commercial ribbon is a linear development located on a major roadway, varying in length from one block to several miles and containing a diverse mix of retail stores, services and offices. Commercial ribbons have a unique form and function in the commercial structure of the city. They provide locations for businesses that depend upon visibility and accessibility and/or need large space, although these businesses are diverse in nature, ranging from gas stations and automobile sales to appliance repair and furniture, theatres, drug stores, hobby shops and many others.

This thesis examines the Whyte Avenue commercial ribbon in Edmonton from a consumer orientation. Several previous studies of these conformations in a city's commercial structure have concentrated on explaining their form and function in terms of the firms which are located on them. Little has been achieved in presenting a complementary appraisal of the ways consumers utilise the functions located on commercial ribbons.

The study is concerned with an investigation of consumer movement, as expressed by shopping trips to a

selected sample of establishments on the ribbon, and movement between establishments. Information is presented on transportation modes used, origins and destinations of shopping trips and store trade areas, which facilitates the breakdown of consumer movement into "through trips," "special-purpose trips," and "local customer trips." The location and nature of functional nodes, or groups of commercial establishments which cluster and function in a similar fashion to nucleated shopping centres, is also investigated, as is the proposition that the Whyte Avenue ribbon acts as an intervening opportunity for customers living south of the avenue who have to traverse it to reach some original shopping destination, such as downtown.

A customer interview survey, administered by interviewers at five selected commercial establishments during four two-hour interview periods, provided the empirical basis on which this study was formulated. The study concludes that both local customers and through customers, often making special-purpose trips, are the major sources of clientele for establishments located on this commercial ribbon. It further concludes that certain functional nodes are located along the ribbon, corresponding with their location adjacent to important cross-traffic arteries, which function as nucleated shopping centres. However, conclusions derived regarding

the function of Whyte Avenue as an intervening opportunity are not as firm.

ACKNOWLEDGEMENTS

I am deeply indebted to my thesis supervisor, Dr. Denis Johnson of the Department of Geography, for his continued encouragement and constructive criticism in the preparation of this thesis. My appreciation is also extended to Dr. Ken Fairbairn of the Department of Geography for his suggestions and helpful guidance in the preparation of the final draft, and to Professor D.Weideman of the Department of Extension, for appraising this thesis.

I wish to thank the University of Alberta for the Intersession Bursary it awarded me to facilitate this research. My thanks are similarly extended to the Real Estate Programme Advisory Committee of the Extension Department, University of Alberta, without whose financial assistance much of this study would have been impossible.

Appreciation is expressed to the City of Edmonton Planning Department, particularly to Mr. Roy Kelly, and to the Assessor's Department for providing necessary information for this study. Thanks are extended to Mr. Jack Chesterman for map reproduction and photographic

work, to Mrs. Laura Zornes for her competent work in typing the final draft, to those students of the Department of Geography who gave of their time to conduct interviews, and to Dr. Ross Robinson of the Department of Geography, Wollongong University College, who was responsible for my coming to Canada.

Finally, I am most grateful to my wife, Carol, for her encouragement at every stage in the preparation of this thesis. She has been an unfailing source of support, both moral and financial, during the course of my graduate programme at the University of Alberta.

TABLE OF CONTENTS

	Page
ABSTRACT	iv
ACKNOWLEDGEMENTS	vii
TABLE OF CONTENTS	ix
LIST OF TABLES	xii
LIST OF FIGURES	xiv
LIST OF PHOTOGRAPHIC PLATES	xvi

CHAPTER

I	INTRODUCTION	1
	NATURE OF THE STUDY	4
	STATEMENT OF THE PROBLEM	8
	METHODOLOGY	10
	DEFINITIONS	13
	PLAN OF PRESENTATION	18
II	FORM AND FUNCTION OF COMMERCIAL RIBBONS	20
	INTRODUCTION	20
	NATURE OF COMMERCIAL RIBBONS	20
	General Studies of Commercial Ribbons	21
	Commercial Ribbon Studies in Edmonton	31
	Summary	33
	COMMERCIAL STRUCTURE OF THE CITY OF EDMONTON	34

CHAPTER		Page
	Central Business District	34
	Planned Regional Shopping Centres	37
	District Shopping Centres	38
	Planned Neighbourhood Shopping Centres	38
	Isolated Commercial Areas	39
	Commercial Ribbons in Edmonton .	39
	SUMMARY	52
III	WHYTE AVENUE 1973	53
	INTRODUCTION	53
	HISTORICAL DEVELOPMENT OF THE RIBBON	55
	POPULATION CHANGE OF SOUTH EDMONTON	62
	COMMERCIAL STRUCTURE OF WHYTE AVENUE 1973	64
	Types of Business	69
	Spatial Distribution of Business Establishments	71
	Changes in the Commercial Structure of Whyte Avenue 1968-1973	77
	Size of Establishments	82
	SUMMARY	88
IV	CONSUMER MOVEMENT AND SHOPPING PATTERNS ON WHYTE AVENUE	89
	INTRODUCTION	89
	THE CUSTOMER INTERVIEW SURVEY	90
	Selection of Interview Times ..	90
	Selection of Interview Stores .	94
	Selection of Interviewees and Nature of the Sample	99
	THE CUSTOMER INTERVIEW SURVEY: RESULTS AND ANALYSIS	101
	The Nature of Shopping Trips ..	101

CHAPTER Page

Special Purpose Shopping Trips 105
Origins and Destinations of Shopping Trips to Whyte Avenue 107
Transportation Modes Used by Respondents 124
Dominance of Sections of Whyte Avenue 130
Whyte Avenue as an Intervening Opportunity 135
SUMMARY 136

V SUMMARY AND CONCLUSIONS 140
INTRODUCTION 140
THE NATURE OF SHOPPING TRIPS 140
LOCATION OF FUNCTIONAL NODES 145
WHYTE AVENUE AS AN INTERVENING OPPORTUNITY 148
CONCLUSIONS 150
SUGGESTIONS FOR FURTHER RESEARCH ... 151

BIBLIOGRAPHY 155

APPENDICES

A CLASSIFICATION OF BUSINESS TYPES 161
B CUSTOMER INTERVIEW QUESTIONNAIRE 164

LIST OF TABLES

TABLE	DESCRIPTION	Page
1	Ground Floor Retail Structure for Different Commercial Forms	36
2	Land and Building Space Available on Commercial Ribbons in Edmonton	42
3	Population Changes in South Edmonton, 1956-1971	63
4	Population of South Edmonton By Selected Census Tracts Adjacent to Whyte Avenue ..	65
5	Spatial Distribution of Establishments on Whyte Avenue, 1973	67
6	Comparison of the Distribution of Business Types on Whyte Avenue, 1968 and 1973	78
7	Square Footage of Business Types by Major Groups on Whyte Avenue, 1973	83
8	Number of Employees by Major Group, 1973	87
9	Number of Interview Responses	93
10	Frequency of Shopping Trips to Interview Stores on Whyte Avenue	103
11	Number of Establishments Visited on Frequent Shopping Trips to Whyte Avenue	104

LIST OF TABLES (continued)

TABLE	DESCRIPTION	Page
12	Frequency of Special Shopping Trips to Interview Stores on Whyte Avenue	106
13	Retail Goods and Services Purchased on Special Purpose Trips to Whyte Avenue ...	108
14	Respondent's Origins of Shopping Trips to Interview Stores on Whyte Avenue	109
15	Destinations of Respondents After Shopping Trips to Interview Stores on Whyte Avenue	111
16	Distance Travelled by Respondents from Origin of Shopping Trip to Interview Store	112
17	Mode of Transportation Used Between Shopping Trip Origin and Interview Stores on Whyte Avenue	125
18	Mode of Transportation Used by Respondents When Commuting Between Commercial Establishments on Whyte Avenue	128
19	Respondent's Parking Preferences for Whyte Avenue	129
20	Location of Frequently Visited Sections of Whyte Avenue	131
21	Respondent's Reasons for Visiting Particular Sections of Whyte Avenue More Than Others	134
22	Respondent's Reasons for Preferring to Shop at Whyte Avenue Instead of Travelling Downtown	138

LIST OF FIGURES

FIGURE		Page
1	Components of City Retail Structure	2
2	Location of the Study Area in Edmonton ..	6
3	Generalised Retail Pattern	35
4	Ribbon Commercial Areas in Edmonton, 1973	41
5	Location Elements of Whyte Avenue (South Edmonton)	54
6	Population of South Edmonton by Census Tracts, 1966	66
7	Population of South Edmonton by Census Tracts, 1971	66
8	Number of Commercial Establishments on Whyte Avenue by Group, 1973	68
9	Changes in Absolute Numbers of Establishments on Whyte Avenue, 1968-1973	79
10	Proportional Changes in Number of Establishments on Whyte Avenue, 1968-1973 ...	80
11	Square Footage of Business Establishments on Whyte Avenue, 1973	84
12	Comparative Number and Square Footage of Business Establishments on Whyte Avenue, 1973	85

LIST OF FIGURES (continued)

FIGURE		Page
13	Origin of Shopping Trips to Army and Navy	114
14	Destination After Shopping Trips to Army and Navy	114
15	Origin of Shopping Trips to House of Stein	117
16	Destination After Shopping Trips to House of Stein	117
17	Origin of Shopping Trips to Empress Bakery	119
18	Destination After Shopping Trips to Empress Bakery	119
19	Origin of Shopping Trips to Town Talk Fashions	121
20	Destination After Shopping Trips to Town Talk Fashions	121
21	Origin of Shopping Trips to Owl Drug Mart	123
22	Destination After Shopping Trips to Owl Drug Mart	123
23	Frequency of Patronage of Sections of Whyte Avenue	132
24	Home Addresses of Respondents Living South of Whyte Avenue who Prefer to Shop at Whyte Avenue	137
25	Simple Origin and Destination Relationships	143

LIST OF PHOTOGRAPHIC PLATES

PLATE	DESCRIPTION	Page
1	High-rise apartment buildings adjacent to Whyte Avenue	57
2	The South Edmonton Railroad Terminal around which commercial establishments located in the early development of the Whyte Avenue shopping district	57
3	Older commercial structures along the ribbon	59
4	Examples of older commercial establishments attracted to Whyte Avenue	59
5	Example of newer commercial developments on Whyte Avenue, the Whyte Avenue Building	60
6	A further example of commercial redevelopment on Whyte Avenue - The Inn on Whyte	60
7	A source of Traffic congestion along the ribbon, railroad tracks across Whyte Avenue	73
8	The Army and Navy Department Store	73
9	New and used automobile retailing, part of a special sub-area on Whyte Avenue forming an "automobile row"	75
10	Older buildings containing low quality retail stores on ground floors and usually vacant office space on upper storeys	75

LIST OF PHOTOGRAPHIC PLATES (continued)

PLATE	DESCRIPTION	Page
11	The House of Stein - Interview Store	96
12	Owl Drug Mart - Interview Store	96
13	Empress Bakery - Interview Store in the Planned Strathcona Neighbourhood Centre .	98
14	Town Talk Fashions - Interview Store	98

CHAPTER I

INTRODUCTION

All cities display a degree of internal organisation and in terms of urban space, this order is most frequently described by regularities in land use patterns. Commercial activities form an important part of the economic activity which occurs within urban areas, and in order to service the urban population as efficiently as possible, they are spatially distributed in a general agreement with the distribution of this population.[1]

Results from the study of the commercial structure of cities during the past twenty-five years suggest that an urban business complex may be disaggregated into three major conformations, each containing a number of sub-types. Berry conceptualises this structure as represented in Figure 1.[2] Briefly, the three conformations of retail and service activities he recognises are:

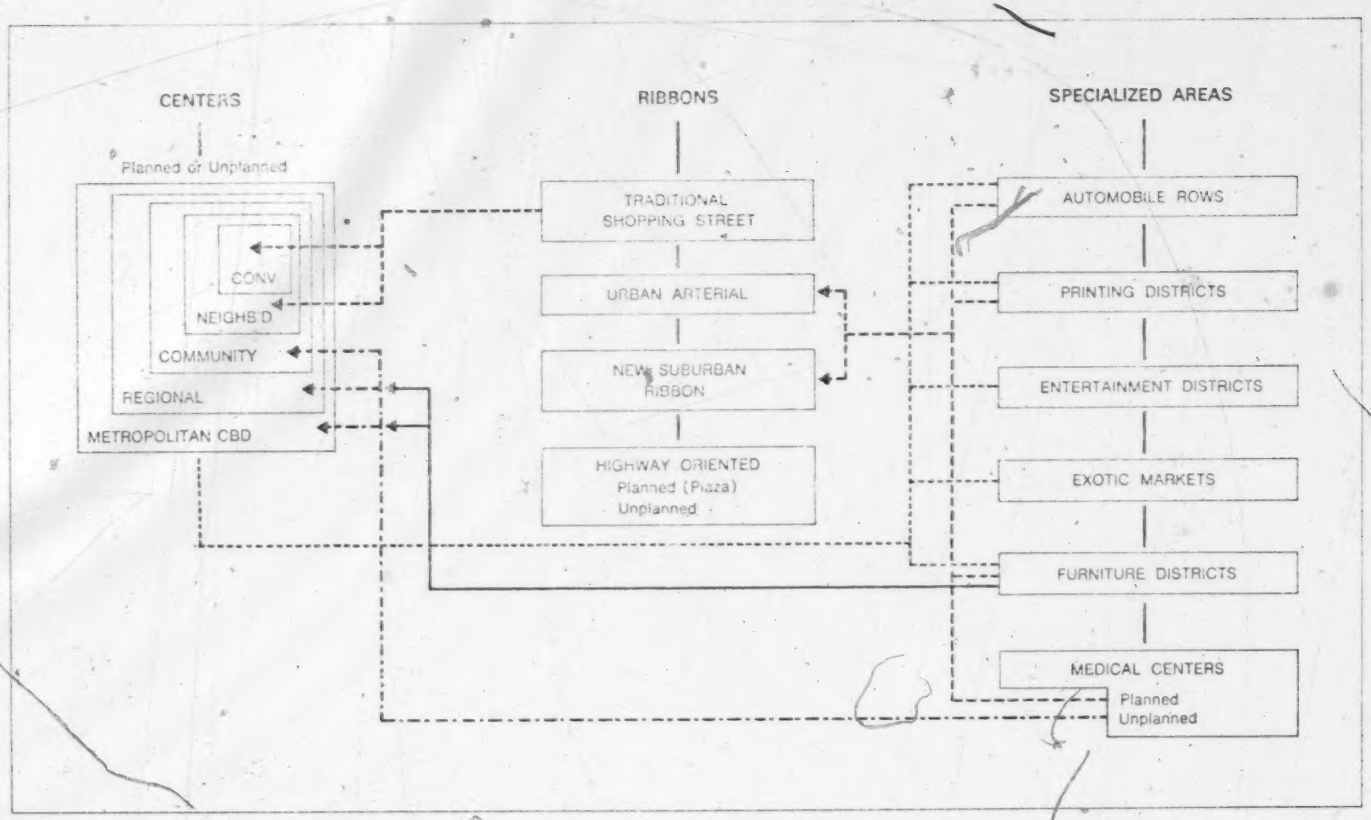
---

[1] M. Yeates and B. Garner The North American City Harper and Row, New York, 1971. p. 310.

[2] B. J. L. Berry Commercial Structure and Commercial Blight Research Paper No. 85, Department of Geography, University of Chicago, 1963.

FIGURE 1

COMPONENTS OF CITY RETAIL STRUCTURE



After Berry, 1963, P. 200

1. A hierarchy of business centres

Functions located here include grocery stores, drug stores, barber shops, variety and clothing stores and department stores. There is pressure for the various functions to cluster because customers tend to shop from store to store during a given shopping trip.

2. Commercial ribbons

These are characterised by highway-oriented functions such as service stations, restaurants and motels, serving demands originating on the highway; and urban arterial developments such as furniture and appliance stores, automobile repair shops, plumbing shops and similar type functions which are usually associated with special, single-purpose trips. Most of the functions located on arterials prefer reasonable access to the urban market, but because of space requirements and the ways in which consumers use them, they function most efficiently outside the nucleated business centres.

3. Specialised functional areas

These areas are characterised by the presence of several related types of establishments, notably dealerships in new and used automobiles (automobile rows) and doctors, dentists and X-ray technicians in medical complexes.

Such functional areas are held intact by close linkages providing comparative shopping, economies in advertising in the case of automobile dealers, and referrals and common use of specialists in the case of medical districts. Most such functional areas require easy accessibility to that segment of the urban market required for their support.

Nature of the Study

Many of these recent studies of the commercial structure of cities have been based on a central place, hierarchic approach. At the same time, dissatisfaction has been expressed with the apparent inadequacy of this approach as an explanation of all intra-urban commercial areas, particularly where a group of commercial establishments tends to be arranged in a linear rather than a nuclear form.[3]

Interest in commercial ribbon developments has stemmed from two main sources -- the general disfavour with which planners and other researchers view such developments, and second, how such developments fit into existing theoretical concepts of urban commercial structure. The general conflicts of opinion and the variety of approaches used in these studies indicate that a further examination of commercial ribbon development is warranted in order to

---

[1]See F. Boal and D. Johnson The Function of Retail and Service Establishments on Commercial Ribbons, The Canadian Geographer, Vol. 9, 1965. pp. 154-69.

facilitate a deeper appreciation of the geographic aspects of urban commercial structure.

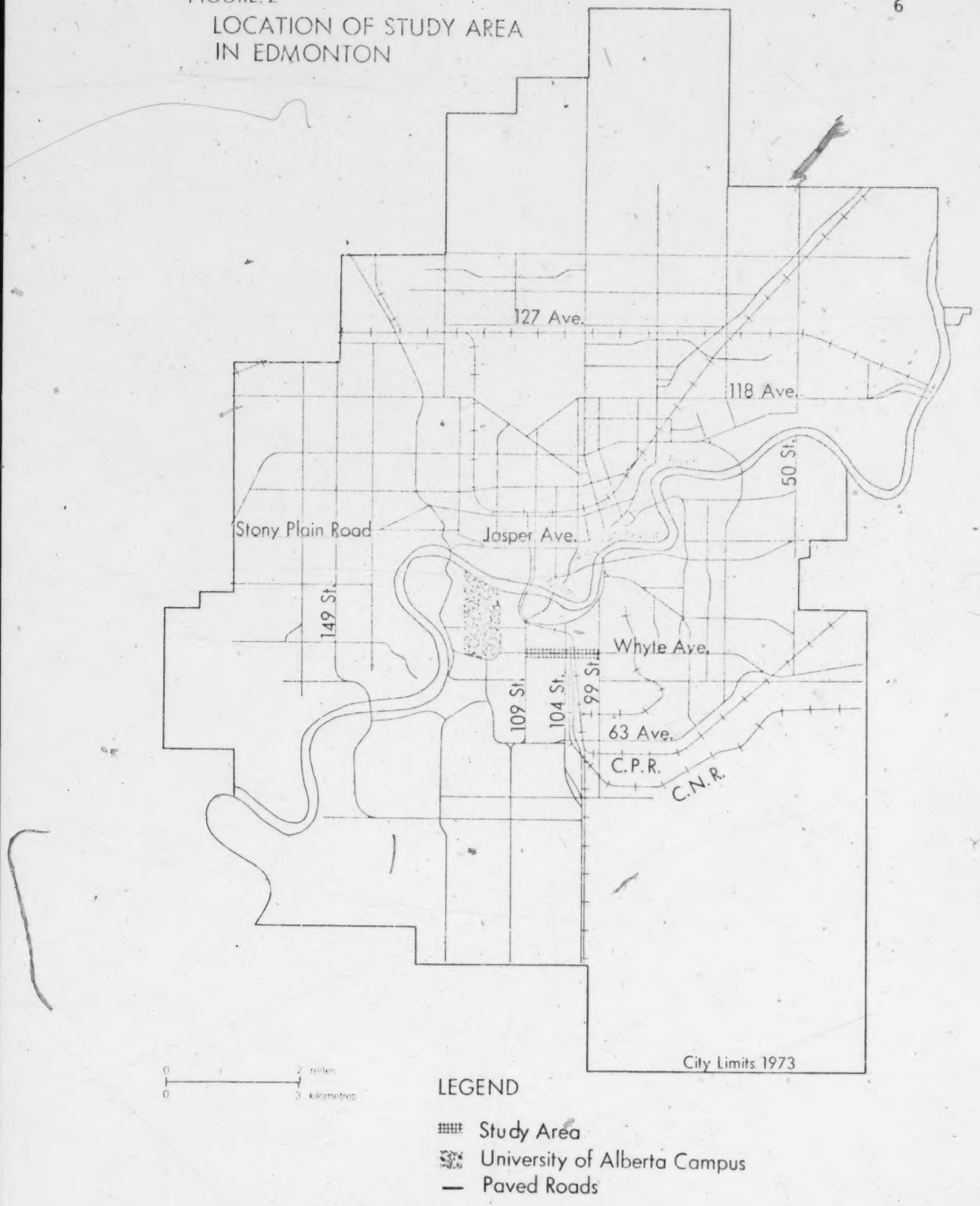
This study is limited to the commercial development fronting on Whyte Avenue, Edmonton, extending from 109 Street to 99 Street (Figure 2). For the most part, this frontage is parallelled by relatively densely populated residential areas consisting of older detached housing and newer high-rise apartment buildings. This section of Whyte Avenue has been chosen as the study area for a number of reasons. It is one of the most well-established commercial ribbons in the city, showing a high degree of continuity of business frontage. It is also one of the principal thoroughfares of the city and is the oldest shopping street in South Edmonton. As well, some research on this ribbon has already been completed.

Norah Chow-Li presented an M. A. thesis on Whyte Avenue, investigating the historical evolution of establishments and commercial blight on the ribbon.[4] Some conclusions were also drawn as to the nature of store trade areas and reasons for location, but the analysis was conducted only from a business operator orientation. It was suggested that a complementary study of consumer behaviour be undertaken,

---

[4] N. Chow The Evolution and Changing Functions of a Commercial Ribbon: A Case Study Unpublished M. A. Thesis, Department of Geography, University of Alberta, Edmonton, 1970.

FIGURE. 2
LOCATION OF STUDY AREA
IN EDMONTON



since conclusions as to the form and function of this ribbon conformation could not be substantiated without reference to such an exercise.

Recently, the City of Edmonton Planning Department conducted a study of all commercial strips in Edmonton.[5] The aim of this study was to locate all the various ribbons within the city, describe the appearance of each, and to make planning recommendations for their future as part of the city's commercial structure. Once again, business operators' questionnaire responses were used as the basis for its recommendations, and the study concluded that ribbons should be considered an integral part of the city's commercial structure, and planning be aimed at fostering rather than hindering their development.

It would seem evident that some gaps appear in these previous studies of commercial ribbons. In the case of the Edmonton studies, conclusions were derived and recommendations formulated from the largely subjective judgments of business operators located along Edmonton's commercial strips, with little attempt being made to integrate a complementary appraisal of the ways consumers utilise the various commercial functions found along such conformations.

---

[1]City of Edmonton Planning Department Commercial Strips in Edmonton: Issues and Opportunities Edmonton, February, 1973.

The aim of this thesis, then, is to present a consumer-oriented complementary study to these past investigations, with particular emphasis on the ways consumers utilise Whyte Avenue as a commercial ribbon. Some conclusions as to what constitutes a commercial ribbon may be drawn, and some of the inadequacies of previous studies are, hopefully, alleviated.

Statement of the Problem

To facilitate the consumer-oriented analysis of this element of city commercial structure, this study is concerned with an investigation of consumer movement, as expressed by shopping trips to a selected sample of establishments on the ribbon. This will provide information on transportation modes used, origins and destinations of shopping trips, and store trade areas. The classification of movement into "through customer trips" and "local customer trips" is also examined, as is the location of functional nodes on the ribbon which empirical evidence suggests form and function as nucleated shopping centres. Finally, the concept that Whyte Avenue possesses an interceptor role and acts as an intervening opportunity for consumers travelling across the ribbon to other parts of the city is investigated.

Three hypotheses are formulated and form the basis of this investigation. The first two were derived primarily

from the literature on commercial ribbons, a review of which is presented in the following chapter. Although opinions vary widely as to the structure of these conformations, it would appear that several common strands recur throughout these studies. These centre on the nature of consumer movement and the formation of functional nodes along the ribbon (See Chapter II, pp.24-31). The third hypothesis was formulated as a consequence of the results obtained from a pilot study for this research. These results indicated that a majority of customers living in South Edmonton generally utilised one of three major traffic arteries to reach the northern portions of the city. These arteries (99 Street, 104 Street and 109 Street) all traversed the Whyte Avenue commercial ribbon, and it was felt that the commercial functions located here may possess an interceptor role and draw off what may otherwise be through traffic. The three hypotheses are:

1. Shopping trips to the Whyte Avenue commercial ribbon are of two types,
    a) "through customer trips" which are of short duration, and for single special-purposes,
    b) "local customer trips," both multi-purpose and single purpose, made by residents of the surrounding residential areas.
2. Certain functional nodes are recognisable and

function as nucleated shopping areas servicing both "through customers" and "local customers."

3. The Whyte Avenue ribbon acts as an intervening opportunity for customers on shopping trips who have to traverse Whyte Avenue to reach another shopping destination.

Methodology

Three approaches were used to acquire the information necessary for this study: library research and research into government records to ascertain the form and function of commercial ribbons both generally and in the local context; a contemporary land use survey of the study area; and a questionnaire survey of a sample of customers who visited the Whyte Avenue ribbon.

Library Research

Much of the background information regarding urban geographers' and planners' concepts of commercial ribbons was obtained from library sources dealing with previous studies undertaken both in Edmonton and in other cities.

Henderson's City of Edmonton Directory 1973 provided a contemporary land use description of the study area, and when compared with the 1968 edition,[6] provided some of the

---

[6]The 1968 edition was selected to compare the recent historical background of the ribbon and because Chow's study and conclusions regarding the form and functioning of the ribbon were based on the commercial establishments located there at that time.

recent historical background information which enabled changes of commercial functions on the ribbon to be compared. The commercial land use was classified into eleven major groups and their sub-groupings, using the Standard Industrial Classification Manual, with some modifications (see Appendix A).

Research into Government Records

This provided information concerning other aspects of the land use along the Whyte Avenue ribbon, such as lot size, building coverage, land and building assessment value. The amount of operating space for each commercial establishment was obtained through research into PLUS data bank print-outs[7] in the City Planning Department. This information is based on the land and property assessment rolls and business assessment records of the City Assessors Department. A series of urban studies carried out by the City of Edmonton Planning Department, particularly those related to the Whyte Avenue district, proved of great value as background information in this study.

Contemporary Land Use Survey

A land use survey was carried ou' in order to gain

---

[7]City of Edmonton Planning Department. Predominant Land Use Survey Computer Print-Out, Edmonton, 1974.

first-hand knowledge of the study area, and to verify the location and type of commercial establishments listed in Henderson's Directory. The field survey was undertaken by the author during the Fall and Winter of 1973.

Questionnaire Survey

The questionnaire survey was designed primarily to obtain information regarding the shopping and movement patterns of consumers who shop at the Whyte Avenue commercial ribbon, in an effort to explain these patterns and their relation to the commercial structure of the ribbon. The questionnaire was designed and based upon the following themes:

1. Frequency and nature of shopping trips to Whyte Avenue and number of establishments visited,

2. Origins and destinations of shopping trips to the ribbon, and mode of transportation used,

3. Nature and location of clusters of establishments, as defined by consumers, which form nodes and function as nucleated shopping centres;

4. The position of Whyte Avenue as an interceptor or intervening opportunity for customers travelling to other parts of the city.

A pilot questionnaire was compiled and tested in February, 1974, and problems which appeared and relevant

factors which had been overlooked were corrected. The final questionnaire which was used appears as Appendix B. In all, some 241 responses were obtained during the interview week, and this was considered a large enough sample from which to test the three hypotheses formulated in this study.

A resume of the questionnaire survey will not be considered here, but rather it will be discussed in detail in Chapter 4. At this juncture, it will suffice to mention some of the advantages and limitations of this survey technique. Among the former, relative cheapness and speed were most significant, as was the opportunity to talk with customers and obtain meningful answers. The major disadvantage was the problem associated with limiting the length of the questionnaire. The final product was the result of many drafts revised many times in an effort to reduce the number of questions to a workable yet meaningful proportion.

Definitions

Throughout the text of this study, frequent mention is made of certain geographical and retailing terms which need to be clearly defined at the outset.

1. Convenience Goods

Convenience goods are defined as those which are bought frequently and repeatedly and which the consumer,

therefore, desires to purchase with the minimum of effort. Brand names, rather than price or assortment, are thought to be the principal consideration, and the cost of search is low in relation to the size of the purchase.[6]

Examples of convenience goods are groceries, gasoline and most items sold in drug stores. However, exceptions occur even in these groups; for example, some types of groceries can only be purchased at certain supermarkets.[7] The term is used in this study to distinguish those goods which do not require much "shopping around" from those goods which people compare at different stores (shopping goods) and those which consumers make a special effort to obtain (specialty goods).

2. Shopping Goods

Shopping goods have been defined as those goods purchased at periodic intervals which may vary from weeks to years, depending on the goods. Such items are expected to be unstandardised and the consumer is usually expected

---

[6]National Economic Development Office Urban Models in Shopping Studies Report of the Economic Development Committee for the Distributive Trades, London, August, 1970. p. 69

[7]D. B. Johnson A Functional Comparison of the Central Retail District with Two Regional Shopping Centres in Calgary, Alberta Unpublished M. A. Thesis, Department of Geography, University of Alberta, Calgary, 1963. p. 11.

to travel to more distant shopping centres in order to obtain a comparison of quality, design and price.[8] Examples of shopping goods are clothing, furniture, jewellery and any goods which offer more than one choice for the potential customer.

As is the case with convenience goods, some types of shopping goods sometimes do not fit into this classification. Some goods classed as shopping goods do not require comparative shopping and are sold, and shopped for, in the same manner as convenience goods.[9] Some items of clothing, for example, are "brand" names and occur at a standard price and quality.

3. Specialty Goods

These have been defined as those goods for whose purchase the consumer is willing to make a special effort. Shops selling specialty goods are usually expected to be of high quality and to establish their custom through advertising in specialist publications and by the diffusion of information via their existing customers.[10] Examples of specialty goods stores are stereo sound shops and antique

---

[8]National Economic Development Office Op. cit., p. 69.

[9]D. B. Johnson Op. cit., pp. 11-12.

[10]National Economic Development Office Op. cit., p. 69.

stores.

4. Commercial Establishment

The term commercial establishment refers to any commercial outlet that sells retail goods or services to the consuming public. In general, the term includes retail stores, services, automobile dealers, hotels, motels, and professional services. An outline of the various types of functions included in this grouping is found in Appendix A.

5. Shopping Trip

A shopping trip can be defined in terms of its purposes:[11] this purpose is to purchase goods and services at one or more commercial establishments. If only one stop is made during a shopping trip it is called a single purpose shopping trip, while two or more stops make up a multiple purpose shopping trip. The shopping trip begins and ends at a location not directly associated with the purpose of the trip, for example, from home to a shopping centre and back home; or from home to work to the store to home, etc.[12]

6. Nodality and Nodal Location

Nodality is best defined as the place of greatest

---

[11] D. B. Johnson Op. cit., p. 12.

[12] Ibid.

convenience. The value of nodality is determined by the number of possible services rendered, goods procured, etc. at a place without additional movement or circulation after the initial trip.[13] It can, therefore, also be defined as a behavioural act of man, not simply as a geometric point or circulation intersect. In behavioural terms, a nodal location is that place where the individual has the greatest freedom to interact. Such a definition involves both population density and areal accessibility, as well as functional availability.[14]

Physical access usually defines the point of most convenience, and with functional availability, is a necessary concommitant of interaction. The definition of nodality, therefore, must involve physical circulation and movement and, in this study, a node or nodal location refers to a cluster or group of commercial establishments which attract large volumes of customers, and which subsequently forms and functions as a nucleated shopping district.

---

[13] See L. Curry The Geography of Service Centres within Towns Proceedings of the I.G.U. Symposium in Urban Geography, Lund Studies in Geography, Series B, No. 24, Lund, 1960. pp. 31-53.

[14] B. J. L. Berry and F. E. Horton Geographic Perspectives on Urban Systems Prentice Hall, Englewood Cliffs, 1970. pp. 169-70.

7. Intervening Opportunity

This concept is allied to the distance minimisation principle, and may be thought of as acting in two ways. First, as a direct way of reducing the costs associated with distance, nearby places are substituted for those further away. Second, intervening opportunities can be thought of as a kind of filter affecting movements, particularly the movements of people, and one which indirectly brings about place substitution. For example, there would probably be a much higher degree of interaction between people living west of the Westmount Shopping Centre and Downtown, were it not for the fact that a centre is located between them to syphon off what might otherwise be through traffic.

In this study, an intervening opportunity is considered to be a group of commercial establishments which is located between a consumer's shopping trip origin and original destination, which draws off some of the original destination's commercial trade, thus acting as an interceptor.

Plan of Presentation

The study is organised into four parts. Chapter 2 is concerned with a review of the geographic and planning literature to ascertain the form and function of commer-

cial ribbons, and particular reference is made to Edmonton commercial studies. This is followed by a description of both the general retail pattern and location and structure of ribbons in Edmonton in 1973.

Secondly, an analysis of the commercial structure of the study area is presented in Chapter III. Included in this section is a brief account of the historical evolution of the ribbon, a description of its present commercial form, and a comparison between the 1968 and present retail structure. Chapter IV presents the results of data obtained from the consumer interview questionnaire. Lastly, the analysis of the hypotheses, summary and conclusions, and implications for further research, are presented in Chapter V.

CHAPTER II

FORM AND FUNCTION OF COMMERCIAL RIBBONS

This chapter focuses on the form and function of commercial ribbons, and is organised under three main sections. First, a comprehensive review of the literature is given in order to establish the theoretical and empirical bases on which this particular element of a city's commercial structure can be examined. The second section discusses the commercial land use structure of the City of Edmonton in order to place the commercial ribbon development on Whyte Avenue into a city-wide perspective. The third section of this chapter focuses specifically on describing the spatial distribution and structure of the various commercial ribbons located within the City of Edmonton. The major source of data used in this chapter was gathered from the geographic and planning literature on commercial ribbons. Miscellaneous Planning Department publications and field investigations carried out in 1973-74 provided other data and contributed to the source material for this chapter.

Nature of Commercial Ribbons

Commercial ribbons are characterised by a linear

development of retail and service land use in association with high vehicular traffic densities. The structure and character of each commercial ribbon is the result of various market forces, such as the relation of the ribbon to the surrounding area, the type of traffic utilising the roadway, and the actual location of the ribbon within the city. However, a review of the literature does not bring out a clear consensus as to what functionally constitutes a commercial ribbon, although several studies have shown that these streets are distinctive in terms of their linear form and are characterised by a great variety of retail and service establishments.

General Studies of Commercial Ribbons

Proudfoot observed that major thoroughfares were characterised by the co-existence of two related attributes. As business streets they possess widely-spaced convenience and shopping goods stores, and as traffic arteries they carry large quantities of vehicular traffic. Although the stores are primarily dependent on customers derived from the traffic, their presence has little countereffect on its density, but thrive on attracting small fractions of the passengers of this traffic.[1] Rolph

---

[1] M. Proudfoot City Retail Structure Economic Geography, Vol. 13, 1937. pp. 425-428.

concluded that "... the class of traffic using the artery determines the kind and quality of merchandise sold on the string street, and consequently the volume of business."[2]

Canoyer reviewed many studies of the locational structure of retail trade in order to establish criteria for successful selections of locations by retail businesses.[3] She suggested that the shopping centre structure was one consisting on string streets and a variety of cluster type shopping centres. The narrowline shopping stores located with respect to high vehicular traffic and relatively low pedestrian traffic relied on patronage derived largely from users of the thoroughfare rather than from nearby residents.

A study in Chicago by Garrison noted that most businesses located on thoroughfares required large and expansive sites, and sold articles which are needed infrequently or by restricted numbers of individuals, or of such a sort that shopping is no prerequisite for buying.[4]

---

[2] I. Rolph The Locational Structure of Retail Trade Domestic Commerce Series, Vol. 80, U. S. Bureau of Foreign and Domestic Commerce, Washington, 1931. p. 5.

[3] H. Canoyer Selecting a Store Location Economic Series No. 56, Bureau of Foreign and Domestic Commerce, Washington, 1946.

[4] W. Garrison The Business Structure of the Consumer Tributary Area of the Fountain Square Major Outlying Business Centre of Evanston Illinois Unpublished PhD Dissertation, Northwestern University, Evanston, 1950.

The multifunctional character of ribbons was viewed by Ratcliff as follows:

> *The nature and uses comprising (this conformation) depends upon the extent to which the street is a main automobile artery and the degree to which it is the core of a residential area. The use of the street as a traffic artery attracts retail shops serving the transients -- filling stations, accessory shops, automobile showrooms, quick lunches and refreshment stands, food markets and fruit stands. The proximity of residential districts encourages convenience type outlets -- drugstores, grocery stores, laundry and cleaning branches, hardware stores, delicatessens and pool halls.*[5]

Thus Ratcliff has attempted to generalise and partially explain the types of functions on commercial ribbons. A simple classification of functions is hindered, however, by a further observation that

> *... since there are infinite variations in the relative importance of major streets as arteries and as the cores of residential districts, the nature of string street retail development cannot be strictly defined.*[6]

The main features of significance in Merry's study

---

[5] R. Ratcliff Internal Arrangement of Land Uses reprinted in H. Mayer and C. Kohn Readings in Urban Geography University of Chicago Press, Chicago, 1959. p. 412.

[6] R. Ratcliff Urban Land Economics McGraw Hill, New York, 1949, p. 388.

of a string retail development in Denver[7] were a careful description of the business types locating along the highways, an analysis of differential location habits of the various types of business, and an outline of the relationships of the patterns ascribed to such factors as traffic flow and numbers of people residing in areas immediately peripheral to the string development. He made the distinction between activities found most frequently by numbers (restaurants, gas, drugstores, grocery stores) and by ground area occupied (auto sales, furniture) and also noted that the density of stores diminished with increasing distance from the city centre. However, marked variations in the pattern occurred, with peaking of density at major intersections creating business nucleations.

Foster and Nelson, in their study of Ventura Boulevard in Los Angeles, defined a ribbon as "... a major street fronted by commercial establishments in an area where the intersecting streets are devoted to a different type of land use."[8] They recognised at least three different situations to fit this definition:

---

[7] P. Merry An Inquiry into the Nature and Function of a String Retail Development: A Case Study of East Colfax Ave., Denver Unpublished PhD. Dissertation, Northwestern University, Evanston, 1955.

[8] G. Foster and H. Nelson Ventura Boulevard: A String Type Shopping Street Real Estate Research Program, University of California, Los Angeles, 1958.

1. as protrusions of the Central Business District: characterised by accessibility from all parts of the city and its opportunity to serve customers associated with the C. B. D. itself.

2. in the inner zone: commercial land uses in this zone can be divided into two groups -- that of nodal points and that developed on the string streets which connect the nodes. A different community of business establishments is associated with each of these two kinds. The accessibility characteristic of the string street within the inner zone is that of multiple directions, being a consequence of the intersecting pattern of such streets within the zone and the attractive power of the nodal concentrations.

3. in the outer zone: the string streets in this zone have a dual function -- in addition to carrying the purely local traffic, they also are the channels along which the inter-city movement occurs. Nodal concentrations are present, but the intersections to which they are anchored are those produced by cross-streets inferior to the ribbon itself. Accessibility tends to be linear, with a definite de-emphasis on lateral movements of people and traffic across the ribbon.

Through their analysis of shopping patterns and traffic flows along Ventura Boulevard, they concluded that

the input location factor for establishments on string streets is accessibility to actual or potential customers, and not to traffic level.

Berry observed that commercial ribbon developments need a certain minimum degree of accessibility to the market served.[9] They do not require sites of maximum centrality within urban areas and consequently can survive along major arteries and urban highways. Although he recognises several different sub-groups of ribbons, essentially their character is repeated from one part of the city to another. The typical function of ribbons, therefore, is to serve demands originating on the highway and to cater for one-stop, home-based shopping trips. They may be thought of as concentrations of commercial activities at common locations but between which there is little, if any, functional association. Three hypotheses describing the occupance of retail establishments on commercial ribbons were advanced by Berry. These were that the density of establishments decrease with increasing distance from the C. B. D., some kinds of functions increase with population density and some kinds increase with traffic volume.

In his investigation of a business ribbon in Capetown, Davies noted

---

[9] B. J. L. Berry Ribbon Developments and the Urban Business Pattern Annals of the Association of American Geographers, Vol. 49, 1959. Pp. 145-159.

> *It seems a fair generalisation to conclude that the business ribbon is a natural growth of the pre-planning phase in an automobile-oriented district and that the zoning controls of the last decade, while able to check much further development of it, have been unable to alter it to any marked extent. The distribution of individual land use categories within the general business groups is also an essentially natural development.*[10]

He delimits three classes of land use along a ribbon.

1. ribbon uses proper, comprised of those uses which depend upon traffic flow along the artery rather than on the local hinterland for support, uses needing large space and accessibility to heavy road transport, and uses such as household services and repair shops which tend to collect and deliver to the door rather than require customers to come to them,

2. nucleations or "bead" uses, which depend mainly on the local hinterland away from the main artery for commercial functions. Establishments comprising these nucleations group together in order to secure the advantages of maximum accessibility from hinterlands and because of mutual advantages of close association in generating pedestrian flow and facilitating comparison shopping,

3. "Indifferent uses," which depend on both the above

---

[10] P. Davies Investigating a Business Ribbon in the Northern Municipalities Capetown. South African Geographical Journal, Vol. 42, 1960. p. 43.

sources for custom.

Davies also pointed to the potential significance in ribbon analysis of the location of commercial activities on different sides of the street. Merry[11] likewise commented on this aspect of the functional nature of commercial ribbons, stating that there were relatively more petrol stations and automobile dealers on the inbound side of the ribbon, and more beauty shops, grocery stores and taverns on the outbound side.

Wolfe derived three conclusions related to commercial ribbons.[12] He stated that with an increase in local population, local automobile ownership and local trip generation to the ribbon,

1. there is an increase in the proportion of local trips as compared with through trips,
2. the concentration and types of establishments along the highway change to conform with the changed needs of the highway users,
3. the quality of traffic service is drastically altered by increased numbers, closer spacing and more intensive use of intersections.

---

[11] P. Merry Op. cit.

[12] R. Wolfe Effects of Ribbon Developments on Traffic Flow Traffic Quarterly, Vol. 18, 1964. Pp. 105-117.

Two studies by Boal and Johnson showed that establishments on commercial ribbons have a dominant functional emphasis related to a particular type of shopping trip.[13] Using the results of a consumer interview survey, they concluded that shopping trips to commercial ribbons could be divided into seven trip categories, as follows:

Sa A special trip to interview establishment on the ribbon. The shopper calls only at the interview establishment and then proceeds back to the origin of the trip, or to a destination located such that the interview establishment could not be interpreted as being conveniently on the route to that destination.

Sb Similar to Sa in that only one stop is made on the ribbon. In this case, however, other stops may be made in the city and trip structure is such that a definite diversion from a more general trip is made to reach the interview establishment.

S-Lw A trip to more than one establishment on the ribbon. Travel to the ribbon is by any means, but between establishments is on foot. This type of trip is interpreted as being "special" to the interview establishment's immediate area and not associated with its accessibility to passing traffic.

S-La A trip made specially to the ribbon but not necessarily specially to the interview establishment. At least two stops are made and the establishments are linked by automobile.

Ta A trip with one or more stops on the ribbon. The trip structure is such that the journey can be interpreted as one using the ribbon as a through route. Excluded are Tb defined below.

---

[13] F. Boal and D. B. Johnson The Function of Retail and Service Establishments on Commercial Ribbons The Canadian Geographer Vol. 9, 1965. Pp. 154-169. Also Nondescript Streets Traffic Quarterly Vol. 22, 1968. Pp. 329-344.

Tb A trip with one or more stops on the ribbon. The trip structure is such that the journey can be interpreted as one using the ribbon as a through route and such that the origin and destination of the trip are a) at least five miles from the interview establishment, and b) lying in opposite directions from the interview establishment.

D "Driving around." A person making this trip has no immediate purpose or destination in mind when interviewed. The route taken to the interview establishment is known, but the future route is uncertain.

Functions are therefore dependent, to varying degrees, on both "special trips," implying linkages with nearby residential areas, and "through trips," which reflect their function in serving transients, either on a trip within the city, or on their way through the city. They state that to classify any particular establishment on a ribbon as "highway oriented" or "hierarchic" is to express only part of the truth. In fact, hierarchic businesses on the ribbon depend, to a significant extent, on passing traffic, while highway oriented establishments draw considerable numbers of customers from nearby residential, industrial and shopping areas. They sum up the functional complexity of commercial ribbons as follows:

> *Commercial ribbons are multifunctional. This can be observed by examining the types of establishments on any particular ribbon ranging from (say) motels and gas stations to drug stores and supermarkets. The ribbons are also multifunctional in that any particular establishment may perform a number of roles... Finally, the ribbons are*

> *multifunctional in spatial terms in that portions of the ribbon may have concentrations of such functions as motels, while other portions may be dominated by food stores, drug stores and beauty and barber shops.*[14]

Commercial Ribbon Studies in Edmonton

Functional and structural readjustment is occurring along commercial ribbons because of changes in consumer shopping habits and changes in merchandising methods. Such changes and the impact that these have on this element of commercial structure formed the basis of Chow's study of Whyte Avenue in Edmonton.[15]

Specifically, the research found that the lineal development of commercial land use along Whyte Avenue has evolved through the processes of accretion, infiltration and replacement under the impetus of various historical, geographical, economic, political and social forces. These forces were advanced as the prime factors in altering the character and functional role of a shopping area. An investigation of the major forms of commercial blight -- functional, physical, economic and environmental -- provided an insight into present problems associated with commercial ribbons.

---

[14] Ibid. Nondescript Streets P. 330.

[15] N. Chow The Evolution and Changing Functions of a Commercial Ribbon: A Case Study Unpublished M. A. Thesis, Department of Geography, University of Alberta, Edmonton, 1970.

The approach Chow adopted was to view retail structure and associated functional relationships from a business operator orientation, based on questionnaire responses from a sample of Whyte Avenue businessmen. Her conclusions on trade areas, customers served and the physical state of the ribbon were based on the judgments of these businessmen and no attempt was made to incorporate an appraisal of consumer attitudes and behaviour into the study.

The City of Edmonton Planning Department, in its survey of ribbon development in Edmonton, states that various clustering tendencies on commercial ribbons have been observed.[16] The most visible clustering occurs among similar types of businesses that locate near each other to provide the customer with comparison shopping for a particular shopping good. Convenience uses such as banks, drug stores, bakeries and small grocery stores also tend to cluster together and form convenience nodes. Less obvious clustering occurs among the businesses that serve each other, such as the automobile parts stores near gas stations and the restaurants that cater to local customers and employees. "In short, the business and customer relationships on commercial ribbons are diversified, and vary according to location, type of traffic and other factors."[17]

---

[16] City of Edmonton Planning Department Commercial Strips in Edmonton: Issues and Opportunities Edmonton, February, 1973.

[17] Ibid. P. 8.

Summary

Clearly, there is a wide consensus as to what functionally constitutes a commercial ribbon. Results from past studies suggest that the main elements of customer use patterns on commercial ribbons are as follows:

1. many establishments, such as gas stations and drive-in restaurants, serve the needs of passing traffic,

2. particularly at nodal or "bead" positions, many establishments, such as supermarkets and food stores, serve surrounding hinterlands,

3. certain establishments, such as clothing stores, specialty shops and department stores, serve neither passing traffic nor surrounding areas, but are oriented to a city-wide clientele,

4. highway oriented and urban arterial establishments on a given ribbon are considered to have no functional linkages with other establishments on the same ribbon, but the hierarchic and special functional types are expected to have linkages with other establishments within the conformation to which they belong. The next section examines the present commercial structure of the City of Edmonton, and describes the location of ribbons within this urban structure.

Commercial Structure of the City of Edmonton

Commercial land use activities are not great users of land within the city, and on average account for only 5% of the developed urban area.[18] The principal components of commercial structure within Edmonton can be classified into six categories, which are

1. The Central Business District
2. Planned Regional Shopping Centres
3. District Shopping Centres
4. Planned Neighbourhood Centres
5. Isolated Commercial Areas
6. Commercial Ribbons.

The present commercial structure of the city is depicted in Figure 3. The following is a brief discussion of the characteristics of the various types of shopping centres found within Edmonton.

The Central Business District

Being the largest single concentration of commercial activity within urban areas, the C. B. D. is characterised by multi-storeyed buildings with retailing occupying choice street level frontages large department

---

[18] M. Yeates and B. Garner The North American City Harper and Row, New York, 1971. P. 310.

FIGURE 3

GENERALIZED RETAIL PATTERN

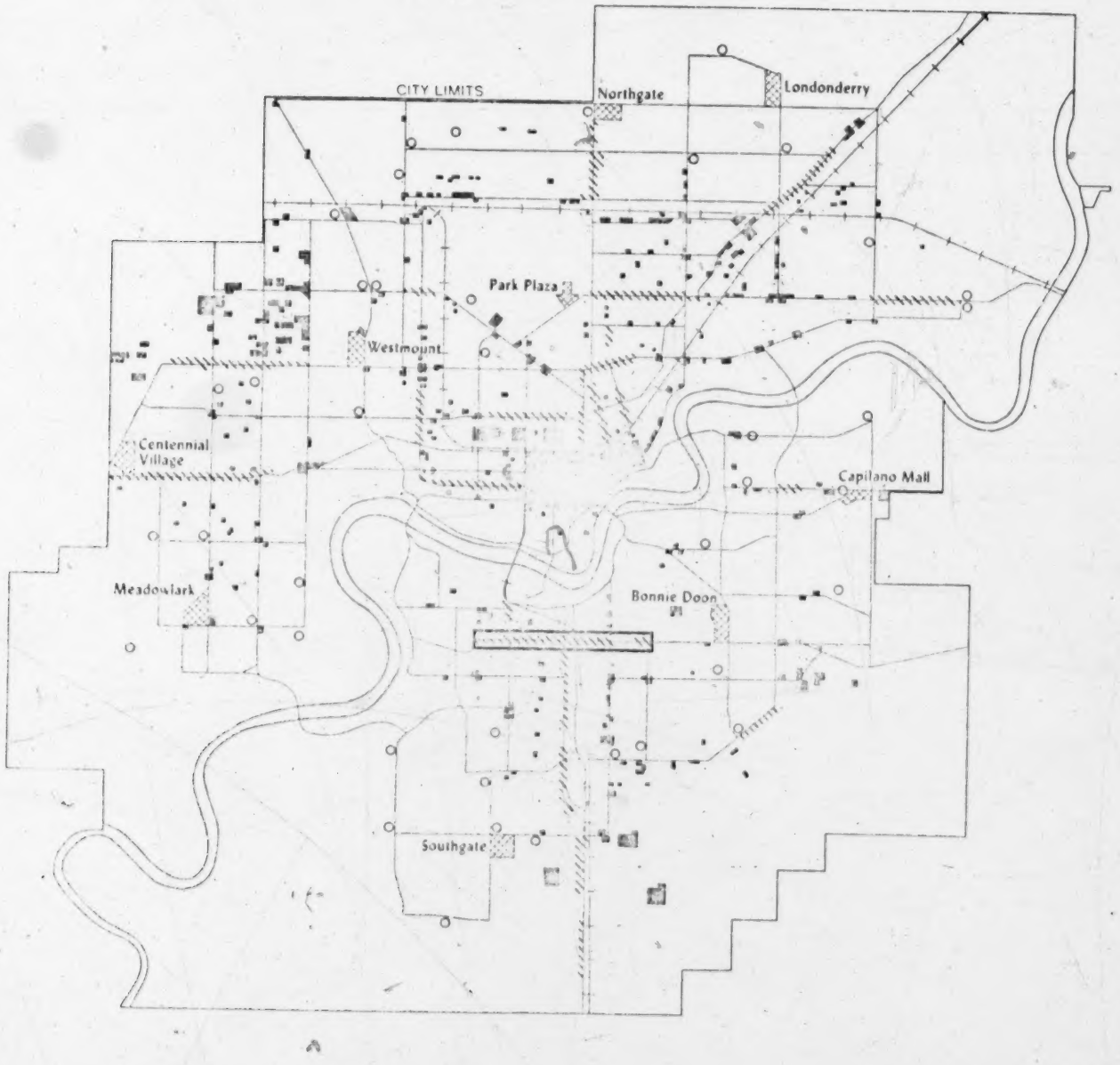


TABLE I

Ground Floor Retail Structure for Different
Commercial Forms in the City of Edmonton

Commercial Form	Approximate Rental Range $
Downtown	5 - 12 per square foot
Regional Shopping Centres	7 - 12 per square foot
Commercial Ribbons (New Buildings)	5 - 6 per square foot
Commercial Ribbons (Old Buildings)	2 - 4 per square foot
Planned Neighbourhood or Community Shopping Centres	2 - 4 per square foot

Source: Field Survey 1972
City of Edmonton Planning Department

stores, clothing stores and a wide range of convenience and shopping goods stores drawing customers from all parts of the city. In contrast to many of the North American cities where downtown areas have suffered a serious decline as a result of commercial decentralisation, the C. B. D. of Edmonton still maintains its commercial dominance.

Planned Regional Shopping Centres

In Edmonton, these types of shopping areas are planned, defined by the City Planning Department as a group of commercial establishments designed, developed, owned and managed as a unit, with adequate off-street parking provided on the site. They are related in their location, size and types of stores to the trade area which the unit serves.[19] The older centres such as Westmount and Bonnie Doon are located in older suburban areas, while recent developments have occurred principally in the newer communities of the city, usually situated at the intersections of major arterials in order to gain a maximum degree of accessibility.

In Edmonton, Regional Shopping Centres normally have a trade area of 30,000 to 100,000 persons, the site usually covers an area of 20 acres or more, with floor space of

---

[19] City of Edmonton General Plan Douglas, Edmonton, 1967. Pp. 55-56.

at least 200,000 square feet.[20] The major drawing power of the centre is usually one or more large department stores, with a wide variety of other commercial establishments located in the same shopping complex.

District Shopping Centres

The City Planning Department estimates that these centres usually serve three to four neighbourhoods or a trade area of 10,000 to 20,000 persons.[21] They generally occupy an area of three to ten acres, contain a floor area of 30,000 to 100,000 square feet, and usually contain a large supermarket or junior department store as the principal tenant. Other commercial establishments include restaurants, clothing stores, beauty shops and drug stores.

Planned Neighbourhood Shopping Centres

Located within the planned neighbourhoods of the city, these centres are one of the most important elements in the neighbourhood design and are designated for use for convenience shopping by the adjacent residents and passing traffic. Generally found on the outer periphery of the planned neighbourhood unit, their site area is often less than three acres, with a floor area up to 30,000 square

---

[20] N. Chow Op. cit. P. 42.

[21] City of Edmonton Op. cit. P. 57.

feet.[22] The trade area usually encompasses the neighbourhood in which the centre is located, or 3,000 to 10,000 persons. These developments are quite numerous in Edmonton, and are composed mainly of grocery stores, drug stores, laundries and barber and beauty shops.

Isolated Commercial Areas

These are chiefly located in older residential neighbourhoods and take the form of small convenience goods stores serving nearby residents. New merchandising and retailing methods, together with modern planning concepts, are gradually eliminating older forms of these developments from the Edmonton commercial scene, and replacing them with newer grocery stores, such as Mac's and 7 - 11's.

Commercial Ribbons in Edmonton

Commercial ribbons have a form and function that is distinct from other types of commercial land use areas in the city. Within the City of Edmonton, there are eleven identifiable commercial ribbon developments,[23] which, although no two are alike, possess the basic characteristics generally regarded as distinguishing this element of urban

---

[22] Ibid.

[23] City of Edmonton Planning Department Commercial Strips in Edmonton: Issues and Opportunities Edmonton, February, 1973.

commercial structure. Figure 4 illustrates the location of these conformations within the city.

The older commercial ribbons in Edmonton, including Whyte Avenue and Stony Plain Road, acted as town centres and originally provided their immediate areas with a mixture of both convenience and comparison goods. Technological innovations, in the form of the street car prior to World War II and, more recently, the automobile, have had profound impacts upon commercial strip developments. These innovations have manifested in the alteration of the orientation of these commercial ribbons from the pedestrian to the motorist, although sections of the older strips have retained a pedestrian orientation.[24] While businesses on older ribbons are closely spaced, often forming a continuous frontage, newer ribbons tend to be looser, with large space-consuming and auto-oriented uses interspersed with more compact plaza developments and neighbourhood shopping centres.

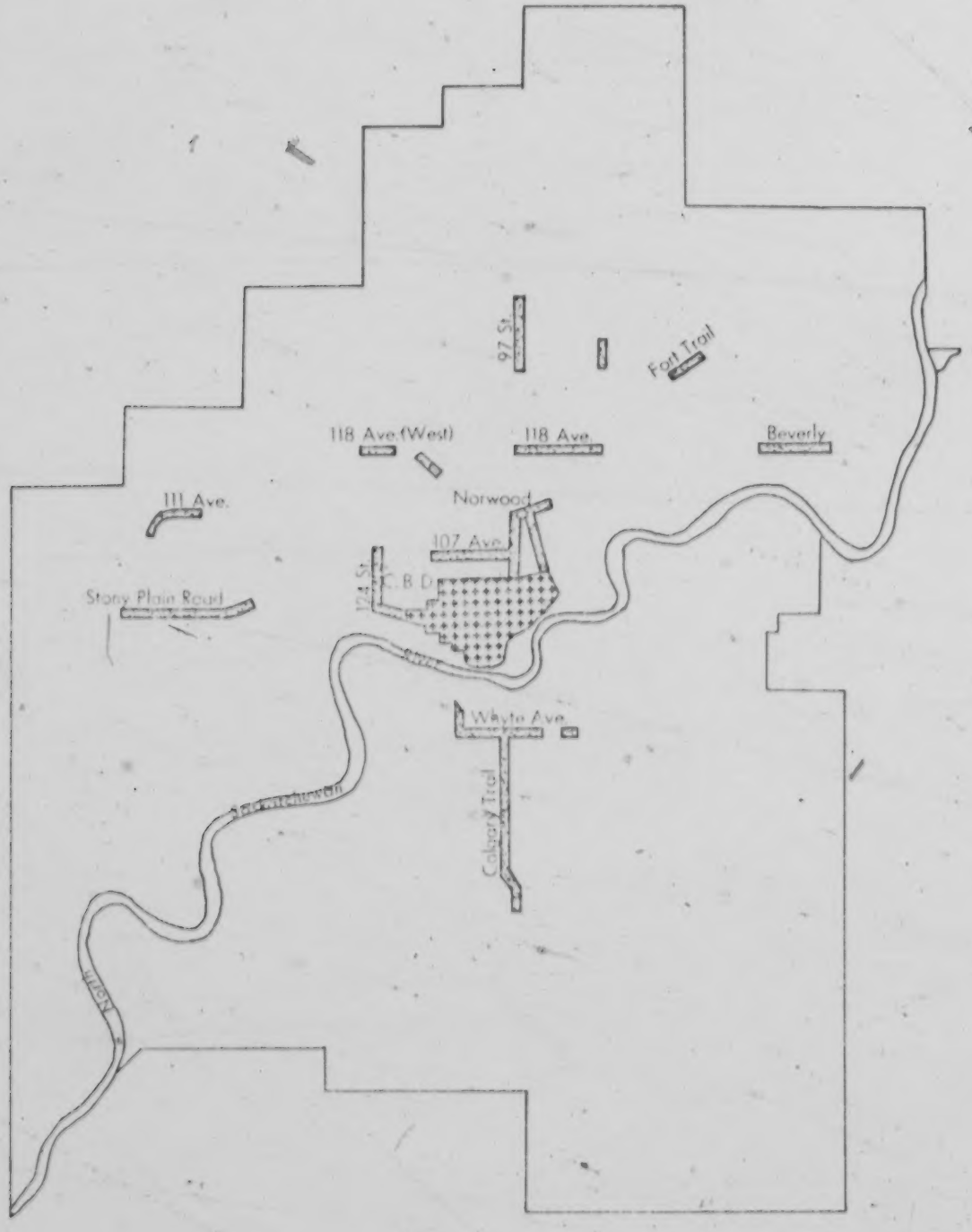
A brief description of each of the major commercial ribbon developments, as distinguished by the City of Edmonton Planning Department,[25] illustrates these points. It is clear that each strip possesses its own character but

---

[24] Where pedestrian activity is high, short pedestrian-oriented ribbons have developed, usually in the form of new plaza developments under high-rise office or residential buildings.

[25] City of Edmonton Planning Department Commercial Strips in Edmonton February, 1973. Appendix A.

FIGURE 4
RIBBON COMMERCIAL AREAS IN EDMONTON 1973



SOURCE: City Planning Department
1973

TABLE II

Land and Building Space Available on Commercial Strips in Edmonton

	Strip Size (Sq. Ft.)	Number of Land Parcels Available	Amount of Land Available	% of Land Area Available	Number of Ground Floor Spaces Available	Total Number of Ground Floor Spaces	% of Ground Floor Spaces Available
Calgary Trail	3,007,498	8	56,630	1.9	3	145	2.1
Whyte Avenue	2,285,243	4	52,216	2.3	7	330	2.1
Beverly (118 Avenue)	1,704,524	2	24,000	1.4	5	95	5.3
Fort Road	488,368	1	39,910	8.2	1	60	1.7
118 Avenue (Central)	2,045,981	0	0	0.0	5	224	2.2
Norwood Boulevard (111 Avenue)	550,000	4	35,660	6.5	4	92	4.3
97 Street	2,100,876	1	17,875	0.8	0	73	0.0
107 Avenue	645,229	2	13,500	2.1	4	51	7.8
124 Street	1,192,701	1	7,500	0.6	12	162	7.5
118 Avenue (at 124 Street)	334,849	0	0	0.0	1	48	2.1
111 Avenue (West)	2,382,054	3	105,286	4.4	4	63	6.3
Stony Plain Road	2,097,160	3	66,800	3.2	10	186	5.4

Source: Field Survey, October, 1972
City Planning Department

certain features are common to all these conformations. Following is a description of each ribbon based on the Planning Department Report:

(1) Calgary Trail

This ribbon extends south from 79 Avenue to the edge of the city, with continuous commercial development from 79 Avenue to 51 Avenue except for Strathcona Composite High School. The ribbon is bordered on the west by low-density residential uses, and on the east by industries. Calgary Trail is the major southern entrance and exit route from Edmonton and carries traffic to and from many other areas of the city.

Although large sections are zoned for industrial use, the majority of the area contains commercial land uses, related to one of the following categories

a) businesses servicing the industries to the east
b) automobile and trailer sales and service
c) recreational equipment
d) uses that have located on the ribbon because of the availability of inexpensive office space.

Several clusters of commercial activity are discernible on the ribbon, such as automobile sales and service between 79 and 77 Avenues. There are fewer convenience uses than on other ribbons in Edmonton, due probably to the fact that

the highway carries a low volume of residential traffic. The majority of Calgary Trail businesses generate special-purpose shopping trips, and the ribbon is almost completely automobile-oriented, with virtually no pedestrian traffic.

(2) Beverly (118 Avenue)

Located along 118 Avenue between 50 and 34 Streets, this ribbon is surrounded by low to medium density residential neighbourhoods providing the businesses in Beverly with a large local market. The ribbon is not continuous, being broken by older single family homes and new apartments. The uses are diverse, but most shops function either as convenience stores or automobile-oriented establishments. A more intense shopping area has formed between 41 Street and 30 Street, where comparison goods and specialty items as well as convenience goods are offered. Pedestrian traffic is common along this portion of the ribbon.

The remainder of the ribbon is predominantly highway-oriented, with residential development again intermingled with commercial uses. A plaza development centred on a Safeway store is located at the extreme east end of the ribbon. The trade area of this conformation, therefore, varies according to the business type, with specialty shops and

industrial contractors servicing the entire Metropolitan region, and the majority of businesses catering primarily to the surrounding local population in addition to rural residents travelling into the city along 118 Avenue.

(3) Fort Road

The Fort Road commercial ribbon is located within a depressed area of the city. East of Fort Road exists an industrial district containing such uses as meat packing, stock yards and auto wrecking yards, while the southern boundary is demarcated by the railway tracks. The residential neighbourhood to the west is aged and physically deteriorated, and much of the ribbon is similarly rundown and unattractive to potential customers.

The ribbon is some four blocks in length, containing service stations, a bakery, banks, restaurants, a department store and a number of convenience stores. Automobile-oriented uses are located mainly in the north block. Passing traffic provides minimal trade benefits since no-parking restrictions have greatly reduced the ribbon's function as a convenience node.

(4) Norwood Boulevard (111 Avenue)

This ribbon begins at 101 Street and extends slightly beyond 91 Street, with the hub located at the 95 Street - Norwood Boulevard intersection. The area is bordered to

the north and south by single family houses, and there is no dominant clustering or type of function on the ribbon. The majority of businesses are either convenience uses catering to local residents, warehouse and industrial-type retail uses that do not rely on pedestrian or passing automobile traffic, or automobile-oriented uses such as used car sales. The area is also a place for beginning or marginal businesses, such as pawn shops and wholesale outlets.

The convenience uses on the ribbon serve primarily the lower-density residential neighbourhoods located in the north and south. There is a small amount of business from the outside for these convenience uses, especially from older people and farmers who personally know shopkeepers. The other uses on the ribbon serve varied customers, depending on the use. A number of businesses do not rely on persons actually coming to them for their business.

(5) 118 Avenue Central

The commercial ribbon along 118 Avenue in northeast Edmonton is located in a low-density, physically deteriorated residential area. The avenue functions as a major traffic artery, accounting for its increasing usage as a truck route through the city. The ribbon is composed of two distinct portions. Park Plaza Shopping Centre between 103 and 101

Streets has attracted several small retail shops, adopting the character of that of a specialty area. A sports shop, hobby shop, music shop and specialised men's clothing store have located here. Due to their proximity to the department stores, these retail establishments consider themselves as part of the Park Plaza Centre rather than as a continuation of the ribbon. They enjoy the amenities of the shopping centre, receive some customer spillover and enjoy the frontal exposure characteristic of commercial ribbons.

The remainder of the ribbon between 97 and 79 Streets contains a diversity of uses. A short automobile-oriented area with intermingled grocery stores may be identified from 97 Street to 95 Street, although the continuity is broken by various community facilities.

The businesses adjacent to Park Plaza command a City-wide trade pattern and the retailers also benefit from department store patronage. Most of the remaining commercial outlets, depending upon the nature of their business, service local pedestrian shoppers, city-wide residents or out-of-town shoppers. Traffic provides minimal trade, and convenience stores rely more on local customers than on through traffic, as do retail establishments offering comparison goods. Specialty shops rely on advertising, "lip service" and the Yellow Pages to attract consumers.

(6) 97 Street

The major thoroughfare through the centre of North Edmonton, this commercial district is surrounded by residential areas. The commercial ribbon may be divided into three distinguishable sections. The southern portion from 127 Avenue to 131 Avenue contains mainly small businesses and offices, many compacted into plaza developments, providing frontal parking and serving as convenience retail and service outlets. Large space users, again providing off-street parking, occupy the central portion of the strip and include new and used car dealerships, service stations, and drive-in restaurants. The north end of the ribbon is composed of the Rosslyn Hotel and Shopping Centre and Northgate Shopping Centre. The commercial continuity of the ribbon, characterised by automobile sales and service uses, is broken by a church and high-rise apartment buildings clustered near the north end.

By serving the dual role of a provincial highway (Number 28), as well as a central urban artery, 97 Street is able to cater to a very large trade area. Convenience stores service neighbourhood as well as city-wide residents, and the automobile dealerships, by providing comparison shopping, also have a city-wide market. Pedestrian traffic occurs only within a plaza and is otherwise non-existent.

(7) 124 Street

This ribbon extends from 109 Avenue south to Jasper Avenue and along the north side of Jasper Avenue to 120 Street. Stores have located on the major intersections for the depth of one block, and commercial outlets are almost continuous on the ribbon except for the blocks from 105 Avenue on the east side, and Stony Plain Road on the west side up to 106 Avenue where older deteriorating apartments exist.

A number of furniture and appliance stores, as well as related interior decoration outlets, have located on the ribbon, with specialty furniture stores concentrating on the south end of the strip. Accessibility to all parts of the city and the relative nearness to the downtown area are the major attractions for this ribbon. Due to the significant special use character, this area attracts customers from areas throughout the city. Customers make special trips for particular goods but often more than one store is visited. Specialty stores such as Electronic Bug House draw city-wide customers, while convenience stores depend more on local residents.

(8) 118 Avenue (at 124 Street)

The precise boundaries of this ribbon extend to the C. N. railroad tracks on the east, west on 118 Avenue to 125

Street, and further west to 127 Street. For a small ribbon, the uses are extremely varied, with specialty and convenience food stores as well as auto-oriented uses locating along its length. As is the case on other ribbons, most customers make special trips to the outlets on the strip.[26] Convenience uses depend on local residents, but also benefit from a major bus transfer point being located at the corner of 118 Avenue and 124 Street. The auto-oriented uses at the eastern end attract customers from the heavy traffic flow on and off the Kingsway.

(9) 111 Avenue West

This commercial ribbon begins at 142 Street and extends west to Mayfield Road, continuing south to Stony Plain Road. The ribbon is bordered on the north by industries and on the south by a low-density residential neighbourhood, and serves as a major entrance to the city from the west.

The majority of commercial uses are either related to trucking and equipment businesses, or related to the industrial area to the north. In addition, there are several mobile home and trailer sales businesses, lumber sales and furniture sales, and large space users are clustered on Mayfield Road. The trading area for businesses located on the ribbon varies greatly with the type

---

[26] City of Edmonton Planning Department Ibid. P. 48.

of use. A number cater to industries located in the vicinity, while others such as trucking equipment and trailer sales have a market area that covers all of Edmonton and Northern Alberta. Because of the farm equipment repairs and sales and the proximity to the edge of the city, farmers are a significant group of customers. The ribbon is oriented towards special customer trips.

(10) Stony Plain Road

Development of this ribbon is compact between 147 Street and 156 Street with stores forming a continuous front, but at 156 Street, large space users such as used car lots and other automobile-oriented uses dominate. The far western end of the ribbon is anchored on the north side by the Centennial Shopping Mall, while on the south side the ribbon merges into industrial uses.

A number of stores service a very large market area, with trailer and mobile home sales trade areas extending throughout Northern Alberta. The ribbon businesses act as a shopping district for persons living west of the city, and most trips are special purpose in nature.

(11) Whyte Avenue

This ribbon is the study area, and is treated in detail in the following chapter.

Summary

This chapter has focused on reviewing the geographical literature on commercial ribbons in order to identify the form and function of this element of a city's commercial structure. The description of Edmonton's commercial structure and of the various commercial ribbons located in the city has placed this exposition into a local framework. Clearly, there is a wide consensus on the part of urban geographers as to what functionally constitutes a commercial ribbon. However, it can be seen with reference to Edmonton, that these conformations are still important elements in the city's commercial structure. A number of the features ascribed to ribbons generally are discernible with reference to the Whyte Avenue strip, and this literature review facilitates the recognition of these features, which are dealt with in subsequent chapters.

CHAPTER III

WHYTE AVENUE 1973

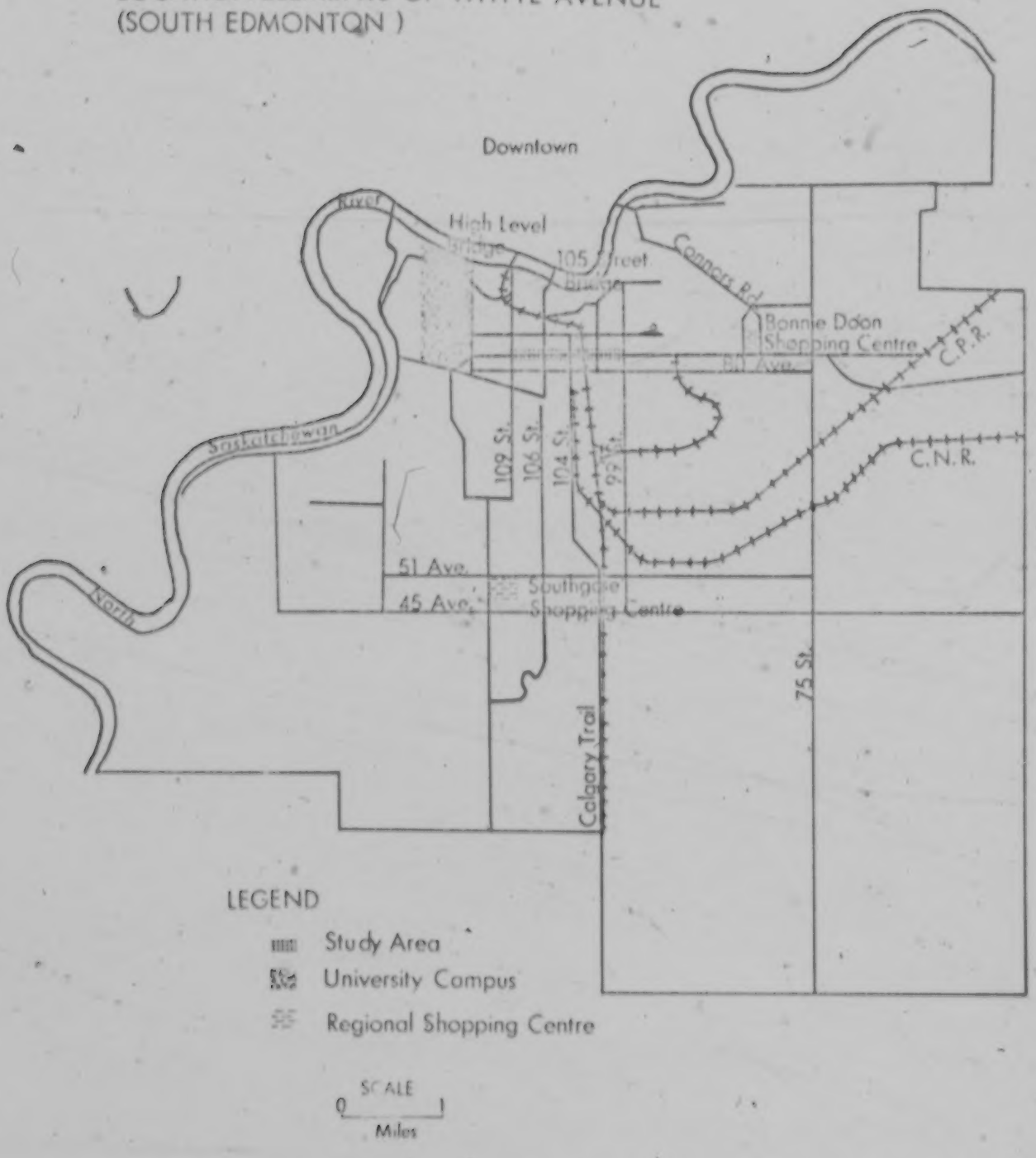
Whyte Avenue (82nd Avenue) is located in South Edmonton,[1] and is surrounded by medium to high density residential areas. The section of the avenue which forms the basis of this study is the commercial strip which extends from 109 Street to 99 Street. The central business district of Edmonton is located approximately 1.6 miles to the north of Whyte Avenue, and two regional shopping centres, Southgate and Bonnie Doon, are also situated in the southern section of the city. Figure 5 illustrates these elements in South Edmonton.

The ribbon is also one of the major traffic arteries of the city, and together with 109, 104 and 99 Streets, carries large volumes of vehicular traffic to various areas of the city, as illustrated in Figure 3. As well, Whyte Avenue and 109 Street carry heavy volumes of traffic to and from the 105 Street Bridge and the High Level Bridge. The passing traffic, combined with the

---

[1] South Edmonton as defined in this study refers to the area south of the North Saskatchewan River, bounded by census tracts 39, 40 and 41 in the north-east, along 98 and 101 Avenues.

FIGURE 5
LOCATION ELEMENTS OF WHYTE AVENUE
(SOUTH EDMONTON)



growing population of this southern section of the city, continue to keep the ribbon accessible to commercial businesses.

Historical Development of the Ribbon

The commercial ribbons of the City of Edmonton have, for many years, constituted a difficult land use problem.[2] It has been claimed that these areas developed along former street car lines which encouraged long, narrow strips of commercial use. They served the disembarking passengers, as well as the residential areas immediately adjacent to the ribbon. With the advent of the automobile, circulation patterns became far more complex, such that in parts of the city the relationship between residential and commercial uses changed from a linear configuration to that of a concentration of commercial functions surrounded by residential areas, dominated in recent years by high-rise apartment towers.

However, in other sections of the city, the automobile strengthened the development of the commercial ribbons, especially along major arterials. In a number of these areas where ribbon functions[3] were found, residential re-

---

[2]City of Edmonton Planning Department Whyte Avenue District Plan Commercial Study Edmonton, 1970. P. 1.

[3]Commercial ribbon uses are those commercial establishments which are located in a linear configuration or strip along a major traffic route, and which rely on the patronage of the passing traffic as well as local residents.

development began to occur. One such area was the Whyte Avenue district, so that at the present time the growing number of medium to high density high-rise apartments that are being constructed on both sides of the ribbon continue to be harbingers of change (Plate 1). The eventual increased residential density will demand a new and different set of relationships between the commercial and residential uses along, and within, the Whyte Avenue district.[4]

The Whyte Avenue strip is one of the oldest commercial ribbons in Edmonton, dating back to 1891 when the Canadian Pacific Railroad completed the Calgary to Edmonton line and constructed a terminal in the Town of Strathcona. The terminal, situated on 103 Street just south of Whyte Avenue (Plate 2) was a major component of the Town of Strathcona, and although this was annexed to Edmonton in 1904, the identification of South Edmonton residents with old Strathcona has remained.[5] Similarly, although at a tangent to Downtown centering on Jasper Avenue, the importance of Whyte Avenue as an access traffic route for vehicles from the east was strengthened by such developments as the opening of the High Level Bridge in 1913. Hence, South Edmonton continued to grow, as did the Whyte Avenue

---

[4]City of Edmonton Planning Department Op. cit. P. 2.

[5]City of Edmonton Planning Department Commercial Strips in Edmonton: Issues and Opportunities Edmonton, February, 1973. P. 34.

Plate 1 High-rise apartment buildings adjacent to Whyte Avenue

Plate 2 The South Edmonton railroad terminal around which commercial establishments located in the early development of the Whyte Avenue Shopping District

retailing district, so that it became the major commercial area on the south side for many years. A number of very old commercial structures dating back to the early decades of the 1900's are still in existence (Plates 3 and 4).

Yet the growth of this district has been gradual over the past seventy years. In the early 1960's, the increased densities of surrounding neighbourhoods due to the construction of new walk-up apartments on Whyte Avenue and the adjacent streets, as well as overall growth of South Edmonton, resulted in the need for expanded commercial facilities to cater to the increased demand for commercial goods and services. However, between 1965 and 1970, the commercial district was relatively stable, with few new businesses entering the ribbon.

Recently, growth and demand for space on the strip has increased.[6] Visible signs of the increasing growth include the Whyte Avenue Building, a high rise office tower near the heart of the retailing district located between 103 and 105 Streets (Plate 5) and the Inn on Whyte Avenue at 106 Street (Plate 6).

A recent survey has indicated that vacancies on Whyte Avenue are low, with only 2.3% of commercial land

---

[6] Ibid. P. 35.

Plate 3 Older commercial structures along the ribbon

Plate 4 Examples of older commercial establishments attracted to Whyte Avenue

Plate 5 Example of newer commercial developments on Whyte Avenue - The Whyte Avenue Building

Plate 6 A further example of commercial redevelopment on Whyte Avenue - The Inn on Whyte

available for development, and only seven ground floor vacant spaces exist on the entire ribbon.[7] This is a significant improvement since 1968 when Chow found fifty-two retail vacancies, or a 6% vacancy rate.[8] However, there does exist a number of older buildings particularly between 103 and 105 Streets, that might be redeveloped if current owners were willing to sell their property, and if plans for the CPR railroad line which crosses Whyte Avenue and is responsible for much of the traffic congestion along the ribbon, were determined.[9] A further factor complicating the issue is that the Strathcona Historical Society is actively engaged in attempting to preserve a number of these older buildings as historical sites.

A special land use sub-market on Whyte Avenue is office space. There is a great deal of second-storey office space available, but this tends to be situated in older buildings where lack of physical amenities combined with parking problems makes it relatively unattractive. The new

---

[7] Ibid. P. 35 and field investigation.

[8] N. Chow The Evolution and Changing Functions of a Commercial Ribbon: A Case Study Unpublished M. A. Thesis, Department of Geography, University of Alberta, Edmonton, 1970. P.97a.

[9] A great deal of attention has been focused on plans for the CPR in this area. One alternative suggested is to create a freeway using the CPR right-of-way, while another suggests lowering or raising the railway tracks do as not to impede traffic flow along Whyte Avenue.

office building construction in the area, however, is substantial, and realtors have indicated in a Planning Department survey that they have experienced little difficulty in renting the new space.[10]

To summarise, Whyte Avenue began as the business centre for the Town of Strathcona, and has continued to grow as a commercial area as the city as a whole has grown. The ribbon between 109 and 99 Streets is a relatively continuous business frontage, occupying both sides of the avenue. At key intersections (99, 104 and 109 Streets) commercial activities appear to have concentrated as a result of the growth in the number of commercial functions along the ribbon and increased traffic volumes. A detailed description of the historical evolution of this commercial ribbon may be found in Chow's thesis, and she has concluded "... that historical, geographical and economic forces combined to establish the form of the present structure which extends along Whyte Avenue."[11]

Population Change of South Edmonton

As indicated in Table 3, the South Edmonton district has undergone a marked increase in population in recent years. Table 4 and Figures 6 and 7 show the dis-

---

[10] City of Edmonton Planning Department Op. cit. P. 35.

[11] N. Chow Op. cit. P. 28.

TABLE 3

Population Changes in South Edmonton 1956-71[12]

Year	Population	Change
1956	75,889	-
1961	84,884	8,995
1966	80,827	-4,057
1971	104,140	23,313

Source: Census Data, Statistics Canada, Ottawa.

[12]It should be noted that the aggregate population figures represented in this table are derived from figures quoted by census tracts from the 1956, 1961, 1966, and 1971 Censuses. A number of census tract alterations have occurred between censuses, making a more detailed breakdown somewhat difficult.

tribution of population by census tracts in the portions of South Edmonton which surround the Whyte Avenue commercial ribbon, and a number of observations may be made regarding the changing distributions.

It is evident that a number of tracts have increased in total population, particularly those immediately adjacent to Whyte Avenue. This may be explained in terms of the increased construction of apartment buildings in close proximity to the commercial district and the University of Alberta campus. Several of the inner tracts, however, have suffered declining populations, while the majority of those located further away from the ribbon have remained relatively steady or declined only slightly between the two years in question. An explanation for these trends probably lies in the residential redevelopment experienced in the South Edmonton area in recent years.

Commercial Structure of Whyte Avenue, 1973

The Whyte Avenue ribbon contains a mixture of both convenience and shopping goods stores, as well as numerous service activities. This variety of commercial land use is illustrated in Table 5 and Figure 8. The following analysis of the commercial structure of the ribbon is based on both the number of establishments located on Whyte

TABLE 4

Population of South Edmonton by Selected Census Tracts Adjacent to Whyte Avenue[13]

Census Tract	Population 1966	1971	Absolute Change in Population
20	7,948	7,860	-88
21	5,883	6,400	517
22	3,217	4,385	1,168
23	5,139	4,665	-474
10	5,350	5,065	-285
11	7,270	6,850	-420
12	9,453	9,810	377
13	3,978	4,745	767
14	5,579	5,345	-234
15	5,736	5,545	-191
16	5,206	4,885	-321
17	5,128	4,935	-193

Source: Census Data, Statistics Canada, Ottawa, 1966 and 1971.

[13]These figures do not give the total population for the South Edmonton area as defined in Table 3, but apply to those census tracts immediately adjacent to the Whyte Avenue commercial ribbon.

FIGURE 6
POPULATION OF SOUTH EDMONTON BY CENSUS TRACTS
1966

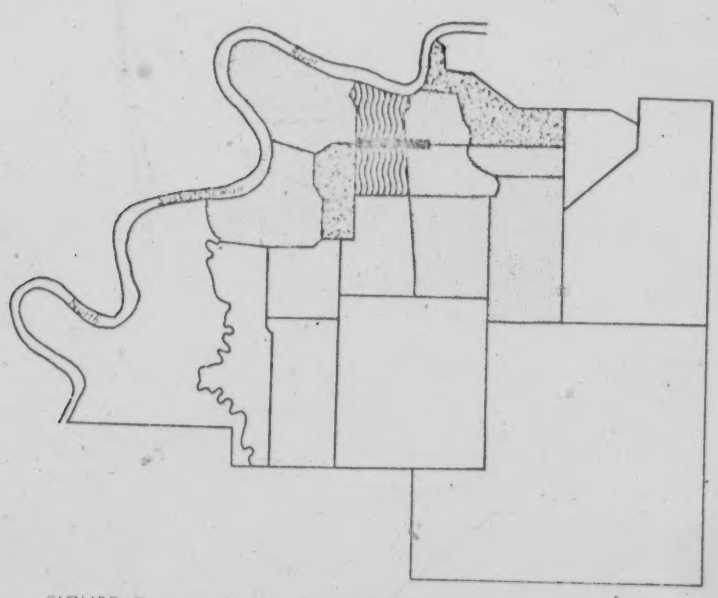


FIGURE 7
POPULATION OF SOUTH EDMONTON BY CENSUS TRACTS
1971

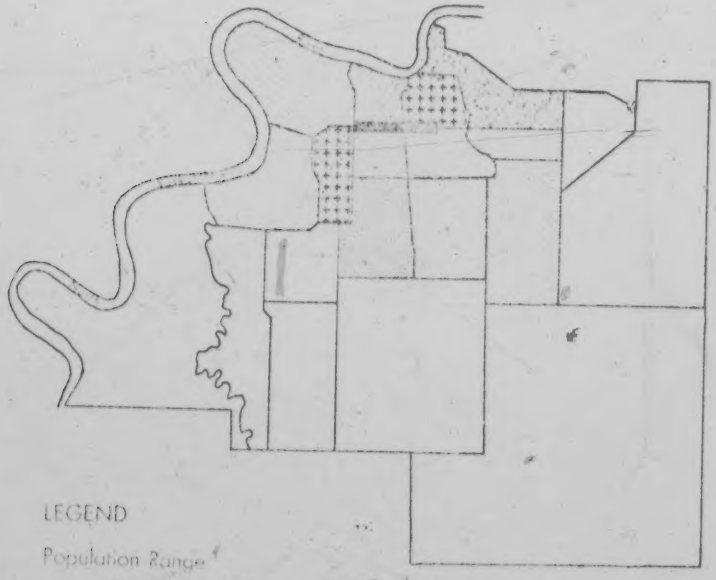
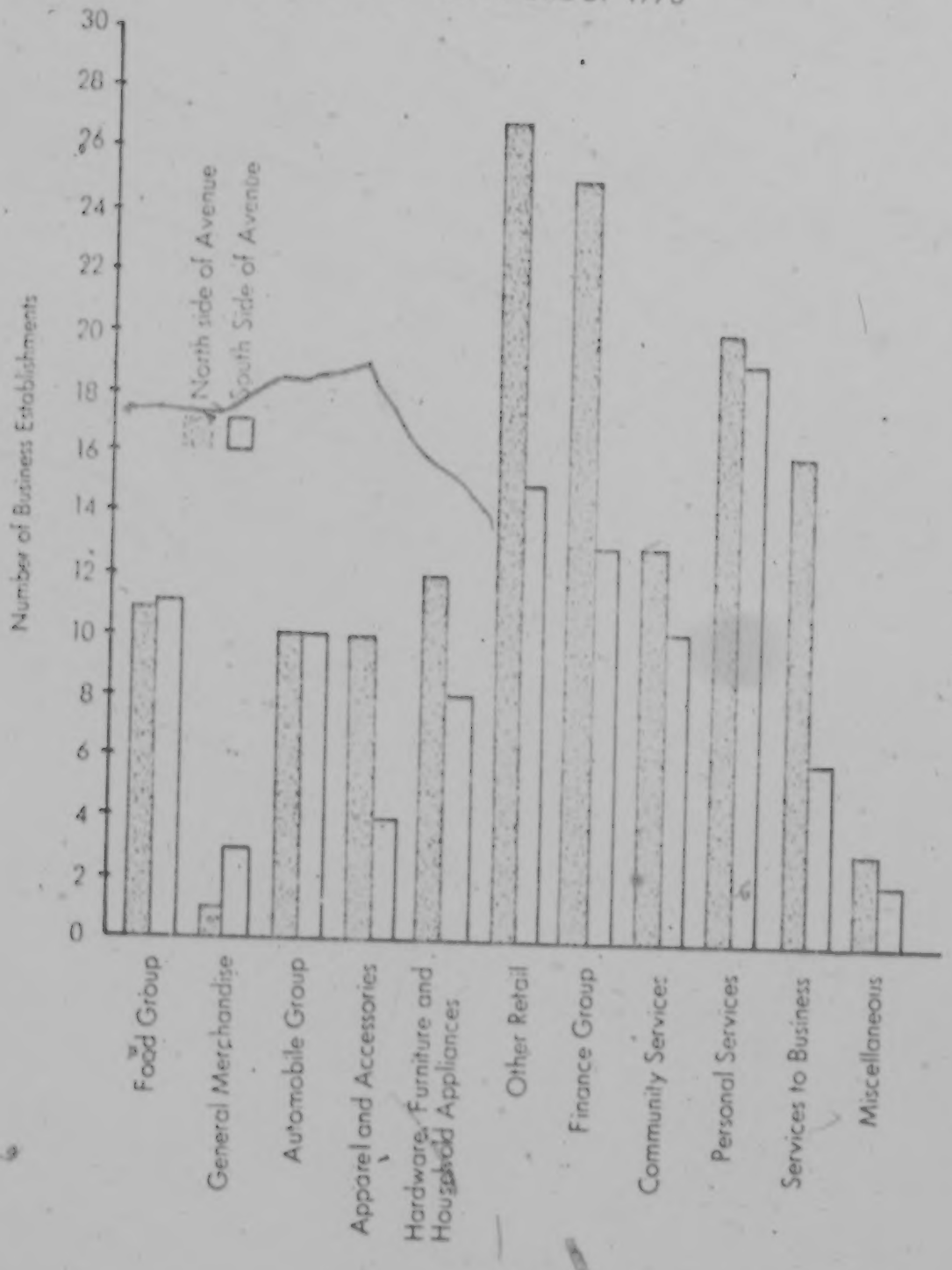


FIGURE 8

NUMBER OF ESTABLISHMENTS ON WHYTE AVENUE BY GROUP 1973



SOURCE: Henderson's Edmonton Directory
1973 Field work

Avenue and on the space occupied by each establishment. Henderson's Edmonton Directory and personal fieldwork provided a current numerical evaluation of the establishments, while PLUS data bank printouts from the City Planning Department provided the floor space figures.

Types of Business

In terms of numbers, three groups of establishments, Finance, Personal Services and Other Retail (comprised mainly of shopping goods stores) dominate the commercial structure of Whyte Avenue. Drug stores, gift and novelty stores, music stores, sporting goods stores, stationery stores and jewellers combine to make up 16.8% of the total number of business types on Whyte Avenue. With the Finance category, banks, finance companies, investment companies, insurance agents and real estate agents combine to add a further 15.2% of the total. The final dominant category, Personal Services, contributes 15.5% to the total number of establishments on the ribbon, and is comprised of shoe repairs, barber shops, beauty parlours, cleaners, restaurants and hotels.

The Food group and Community Services group are the next most dominant business types located on the ribbon. The Food group includes two supermarkets, several meat and grocery stores, meat markets and bakery shops. Within the

Community Services group are business and music schools, medical offices, motion picture theatres and other amusement activities. Both groups account for 9.2% of the total number of businesses located on the strip.

Services to Business, Automobile and Hardware, Furniture and Household Appliances are the next most numerous types of businesses on Whyte Avenue. Within the Services to Business category, which accounts for 8.8% of the total, are located accountants, legal services, printing and duplicating, and engineering and scientific services. Automobile accessories and parts, gas stations, new and used automobile dealers and car rental offices comprise the Automobile group, and contribute 8.0% of the total number of commercial establishments on the ribbon. A further 8.0% is contributed by hardware stores, paint, glass, and wallpaper stores, furniture stores (new and used), radio and T.V. sales and repair shops and household appliances stores in the other major category in this group.

The final group of establishments contributing to the commercial structure of Whyte Avenue are the Apparel and Accessories group, the General Merchandise group and the Miscellaneous Services group. Shoe shops, men's and women's clothing, and fabrics and materials shops account for 5.6% of the total composition of commercial activities on the ribbon. Within the General Merchandise group, only

1.6% of the total is contributed by department and general stores, while the 2.0% from the Miscellaneous Services category is comprised largely of photographic stores and repair shops.

Spatial Distribution of Business Establishments

Business establishments on Whyte Avenue are not evenly distributed, and certain sections of the street are more densely built-up than other sections. The reasons behind this pattern are largely historical, and have been examined in detail by Chow. It will suffice to mention here that the main factors contributing to this phenomenon include the differential residential development abutting the avenue, the direction and volume of both vehicular and pedestrian traffic, the availability of vacant space for new types of establishments, the visibility of the street frontage, and the tendency for certain types of functions to cluster.[14]

East of the railroad tracks, as well as the section of the strip extending from 105 Street to 109 Street, includes a mixture of automobile-oriented, specialty and convenience uses characteristic of commercial ribbons. Clusters of convenience businesses, such as grocery stores,

---

[14] N. Chow Op. cit. P. 59.

drug stores and banks are found at the 99 Street and 109 Street intersections. Specialty businesses ranging from gift stores, hobby stores, pet shops, second-hand shops and furniture stores to restaurants and stereo centres, are distributed along the ribbon. Automobile uses are especially prominant near 102 Street, and near 106 and 107 Streets.

The City Planning Department, in their study of commercial strips in Edmonton, noted that the hub of the Whyte Avenue ribbon is the "shopping district" found between 103 and 105 Streets.[15] While this area includes businesses that depend on special-purpose customer trips (television store, furniture store, cycle shop, theatre) the wide variety of stores, and in particular, the Army and Navy Department Store (Plate 8) attract customers to the area who then shop at other stores. The shopping district also includes the post office, library and fire hall of the old Town of Strathcona, and has traditionally been the shopping district of many people.

The spatial distribution of the major types of commercial establishments within the ribbon development is revealed by examining each of the functions in turn. The Food group is widely distributed along the ribbon. These types of establishments usually locate away from blocks of

---

[15] City of Edmonton Planning Department Op. cit. Pp. 34-35.

PLATE 7 A source of traffic congestion along the ribbon, railroad tracks across Whyte Avenue.

PLATE 8 The Army and Navy Department Store

the highest land value indicative of their lower rent paying ability. Stores in the General Merchandise group occupy very strategic positions in proportion to their total numbers. As mentioned previously, Army and Navy Department Store is responsible for drawing large numbers of shoppers to this area.[16]

Similar to the distribution of the Food group, the Automobile group is located away from the highest land value areas, with these types of establishments often occupaying undeveloped commercial lots. The tendency for dealers to cluster and form "automobile rows" is most noticeable between 101 and 103 Streets, and 105 and 107 Streets (Plate 9). The Apparel and Accessory group forms a rather insignificant proportion of the various types of establishments. A major concentration is between 104 and 105 Streets, where 50% of the total number of stores in this category are located, while 42.8% of the clothing stores are found between 108 and 109 Streets.

The greatest concentration of establishments in the Hardware, Furniture and Household Appliances category occurs between 103 and 104 Streets, although various other businesses within this group are distributed along the

---

[16] S. P. Martin Aspects of the Functional Relationship between Consumers and Commercial Ribbons: A Pilot Study Unpublished Paper, Department of Geography, University of Alberta, Edmonton, March, 1974.

PLATE 9 New and used automobile retailing, part of a special sub-area on Whyte Avenue forming an "automobile row."

PLATE 10 Older buildings containing low quality retail stores on ground floor sites and usually vacant office space on upper storeys.

ribbon. In most cases, these stores are large space consumers, are relatively old structures, and occupy two storeys with ground floors providing ample space for displays (Plate 10).

As with the Apparel and Accessories groups, establishments in the Other Retail category are located in three major concentrations. The greatest concentration is between 103 and 105 Streets, with a dominance of activity on the north side of the ribbon. A second concentration, again with a dominance on the north side of Whyte Avenue, is located between 108 and 109 Streets. The rest are located on the south side of the ribbon between 99 and 101 Streets.

Firms in the Finance group are widely distributed along the ribbon. However, a concentration occurs on the south side of the avenue between 99 and 101 Streets, whereas most other financial establishments favour the north side of the ribbon. Most of the firms in this group, with the exception of banks and real estate agents, usually occupy a second floor location, although ground floor sites are also favoured by the larger finance firms. Less extensive space consumers in the Community Services group such as business schools and medical offices also generally occupy second storey locations, while large space users such as churches and the hospital are spatially associated with other large space users, such as automobile dealers and gas stations.

Personal Services, dominated by restaurants, beauty parlours and barber shops, are found in almost every individual block. Similarly, establishments in the Services to Business group are located throughout the ribbon. Many occupy second floor or basement locations of commercial buildings. The Miscellaneous Services group occupies an insignificant proportion of total numbers of establishments on the avenue, and businesses in this category usually occupy a ground floor site.

Changes in the Commercial Structure of Whyte Avenue 1968-1973

Since Chow's study of 1968, there has been a considerable change in the form and function of the Whyte Avenue commercial ribbon. Table 6 presents a comparison of the distribution of business types on Whyte Avenue in 1968 and 1973. Figure 9 illustrates changes in absolute numbers of establishments, and Figure 10 represents proportional changes.

In terms of absolute numbers of establishments, Whyte Avenue has suffered a marked decrease. In every major category except Apparel and Accessories, there has been an absolute decline in numbers, with establishments in the Personal Services category being most affected. Declines in the Automobile, General Merchandise, Other Retail and Commu-

TABLE 6

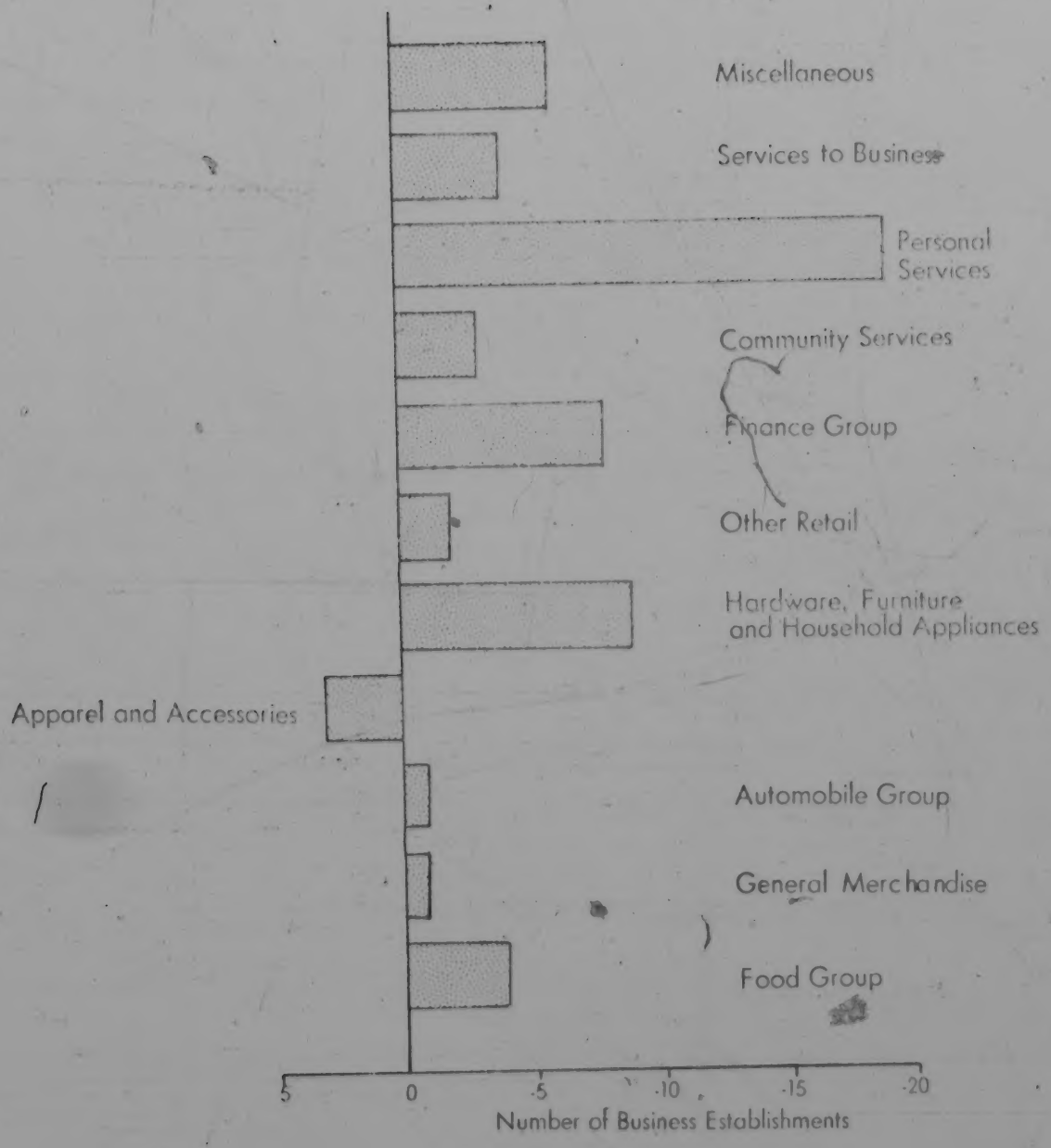
Comparison of the Distribution of Business Types on Whyte Avenue, 1968 and 1973

Group	Absolute Numbers		Change in Absolute Numbers	Percentages		Percentage Change
	1968	1973		1968	1973	
Food	27	23	-4	8.9	9.2	+0.3
General Merchandise	5	4	-1	1.6	1.6	0
Automobile	21	20	-1	6.9	8.0	+2.9
Apparel and Accessories	11	14	+3	3.6	5.6	+2.0
Hardware, Furniture and Household Appliances	29	20	-9	9.5	8.0	-1.5
Other Retail	44	42	-2	14.5	16.8	+2.3
Finance	46	38	-8	15.1	15.2	+0.1
Community Services	26	23	-3	8.6	9.2	+0.6
Personal Services	58	39	-19	19.1	15.6	-3.5
Services to Business	26	22	-4	8.6	8.8	+0.2
Miscellaneous Services	11	5	-6	3.6	2.0	-1.6
Total	304	250	-54	100.0	100.0	+1.8

Source: Henderson's Directories 1968 and 1973 Fieldwork 1973.

FIGURE 9

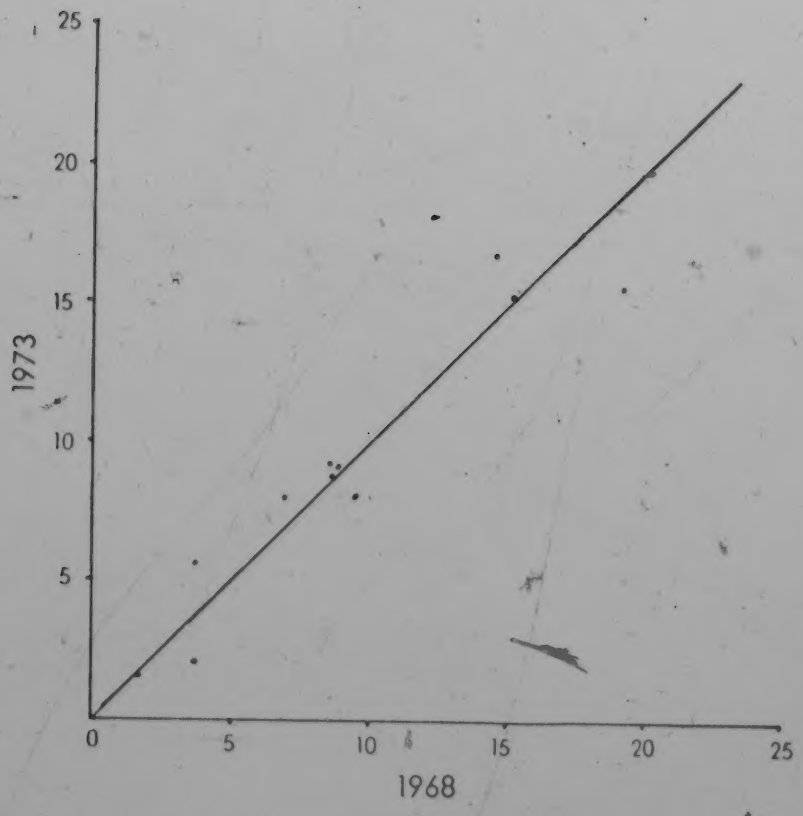
CHANGES IN ABSOLUTE NUMBERS OF ESTABLISHMENTS ON WHYTE AVENUE 1968-1973



SOURCE: Henderson's Edmonton Directories 1968, 1973
Fieldwork 1973

FIGURE 10

PROPORTIONAL CHANGES IN NUMBER OF ESTABLISHMENTS ON WHYTE AVENUE



SOURCE: Henderson's Edmonton Directories
1968, 1973
Fieldwork 1973

nity Services groups sustained relatively little decline while those in the Hardware, Furniture and Household Appliances, Food, Finance, Services to Business and Miscellaneous Services groups experienced major declines in absolute numbers.

However, in terms of the proportion of the total number of establishments located on the ribbon, each major group remained relatively stable or increased during the five year period. The exceptions to this current trend were the establishments in the Hardware, Furniture and Household Appliances, Personal Services and Miscellaneous Services groups which suffered decreases. These commercial uses are relatively small space users, with the exception of those establishments in the first category, and the decline in absolute numbers and proportions has resulted in an increase in vacancy rates on the ribbon, particularly with regard to second storey office space.

Generalising from the figures presented in Table 6, it would appear that establishments in the Other Retail, Personal Services and Finance groups retain their dominance on the Whyte Avenue ribbon. However, the proportional changes between 1968 and 1973 in the other commercial categories appears to have resulted in a more balanced distribution of establishments within this retail conformation. The increase in specialty goods stores is perhaps indica-

tive of the changing nature of Whyte Avenue as a commercial district.

Size of Establishments

Size of establishment can be expressed in terms of number of employees in a particular store, or the amount of space consumed by the individual firm. This section looks at both space requirements and numbers of employees for each major category. Table 7 and Figure 11 summarise the size characteristics of the establishments on Whyte Avenue by major groups.

In terms of square footage, establishments in the Hardware, Furniture and Household Appliances, Personal Services and Automobile groups could be considered large space users. Hardware stores, furniture stores and stores retailing various household appliances account for 26.13% of the total floor space occupied by commercial establishments in the study area. Restaurants, barber shops, beauty shops, hotels and cleaners account for 16.73%, while service stations, automobile dealers and accessory shops occupy 15.73%. In total, these three groups occupy 58.59% of the total floor space of commercial establishments located on the ribbon.

Establishments in the Finance group and Other Retail group are the next most spacious land users in

TABLE 7

Square Footage of Business Types by Major Groups on Whyte Avenue, 1973

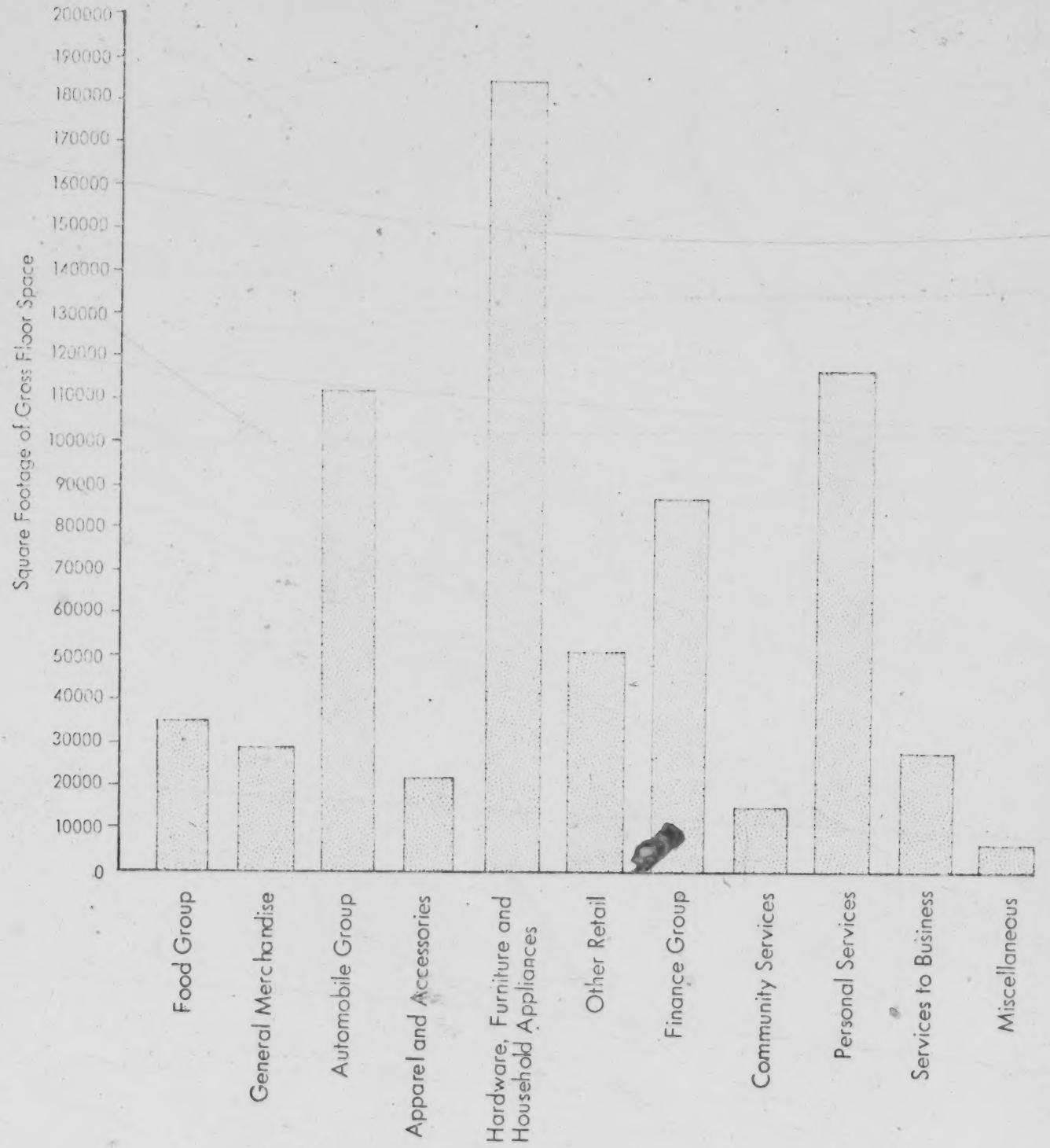
Type of Business	Square Footage	Percentage	*	Cumulative Percentage	*
Food	35,131	4.99	5.16	-	-
General Merchandise	29,438	4.18	4.33	9.17	9.49
Automobile	110,649	15.73	16.26	24.90	25.75
Apparel and Accessories	22,426	3.19	3.30	28.08	29.05
Hardware, Furniture and Household Appliances	183,822	26.13	27.02	54.21	56.07
Other Retail	50,322	7.15	7.40	61.35	63.47
Finance	87,756	12.47	12.89	73.82	76.36
Community Services	15,026	2.13	2.21	75.95	78.57
Personal Services	117,772	16.73	17.31	92.68	95.88
Services to Business	18,425	2.61	2.71	95.29	98.59
Miscellaneous	9,626	1.37	1.41	96.66	100.00
Vacant Space	23,357	3.32		100.00	
Total	703,750	100.00			

* Excluding the Vacant Space Category

Source: City of Edmonton Planning Department PLUS Data Print-outs, 1973.

FIGURE 11

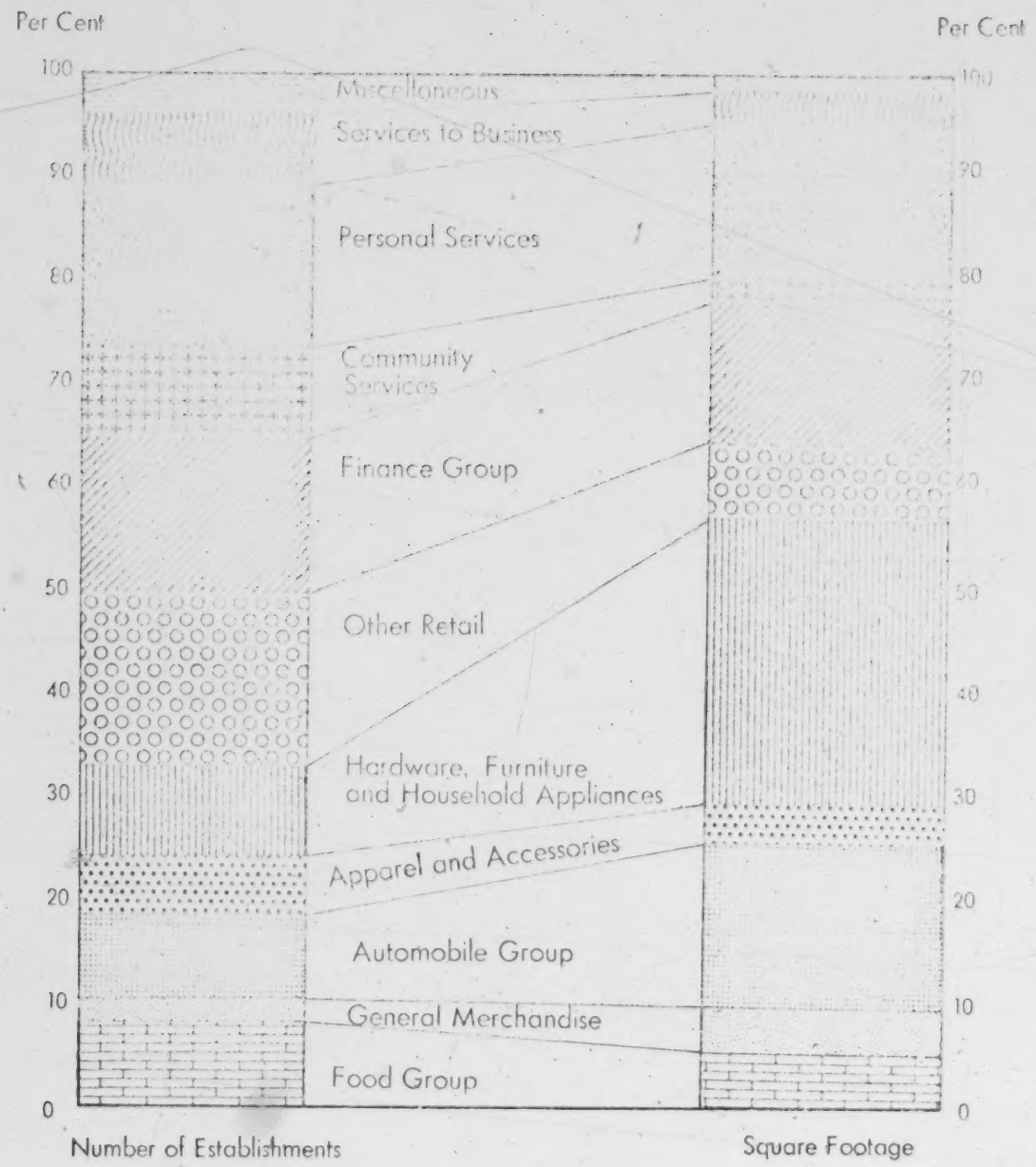
SQUARE FOOTAGE OF BUSINESS ESTABLISHMENTS
ON WHYTE AVENUE 1973



SOURCE: City Planning Department
PLUS Data 1973

FIGURE 12

COMPARATIVE NUMBER AND SQUARE FOOTAGE OF BUSINESS ESTABLISHMENTS ON WHYTE AVENUE 1973



SOURCE: City Planning Department
PLUS Data 1973

regard to floor space. Real estate offices, finance companies and insurance agents occupy 12.47% of the total floor area, comprised of both ground floor and second storey office space. Drug stores, florists, jewellers, bicycle shops and so on account for 7.15%. Establishments in the other groups are generally small space users, particularly those in the service categories which occupy second storey office space above retail outlets. The one exception is the Army and Navy Department Store. Figure 12 presents a comparison between the number and the square footage of business establishments on the ribbon.

Establishments in the Automobile, Personal Services, and Finance groups are the major employers of staff on Whyte Avenue, although the Army and Navy Department Store is the greatest single employer, having 135 staff members (Table 8 summarises the size characteristics of commercial establishments on Whyte Avenue in terms of numbers of employees by major group). Restaurants, new and used car dealerships, service stations and finance companies, which are part of these three categories, are among those with greater than six employees per establishment. Repair shops, convenience grocery stores, book stores, barber shops, jewellers and business schools are among the establishments which have four or less employees per firm.

TABLE 8

Number of Employees by Major Group 1973*

Group	Total Employees	Average Number of Employees Per Firm
Food	61	4
General Merchandise	149**	2
Hardware, Furniture and Household Appliances	38	4
Apparel and Accessories	65	4
Automobile	180	12
Other Retail	40	2
Finance	245	10
Community Services	40	3
Personal Services	227	6
Services to Business	11	1
Miscellaneous	4	1
Total	1060	

* Some figures for businesses were not recorded on the PLUS data

** Includes 135 employed by Army and Navy Department Store

Source: City of Edmonton Planning Department, PLUS Data, 1973.

Summary

The Whyte Avenue commercial ribbon has undergone change in its commercial structure. Originally it served as the major shopping area for the Town of Strathcona and later South Edmonton, but in recent years a number of factors have altered its commercial personality.

The development of high-rise apartments in close proximity has strengthened its function as a supplier of convenience goods and services, but its continued use as a traffic artery has also resulted in its increased attractiveness to shopping goods and specialty establishments. In absolute terms, the number of establishments on the ribbon has declined, particularly in service establishments occupying second storey office space. However, in terms of the proportional number of establishments in each group, this area of the city is increasing in attractiveness for retail stores serving a specialised market.

CHAPTER IV

CONSUMER MOVEMENT AND SHOPPING PATTERNS ON WHYTE AVENUE

In order to obtain data which could describe the nature of consumer movement, customer shopping patterns and the formation of functional nodes on the Whyte Avenue ribbon, a customer interview survey was carried out. This formed the information base used to describe consumer behaviour and to test the hypotheses outlined in Chapter I.

This chapter examines the results of data obtained from the consumer interview questionnaire (Appendix B). Firstly, the nature of the consumer survey is explained with attention being focussed on the reasons for the selection of the interview times, places and interviewers, a brief description of each of the interview stores, and a discussion of the statistical nature of the sample.

Second, the results obtained from the questionnaire are investigated, with consideration being given to the nature of shopping trips, the occurrence of special-purpose shopping trips, the origins and destinations of consumers in relation to the interview stores, and the incidence of particular sections of the study area which

consumers visit more frequently than others.

The Customer Interview Survey

Information on customer movement and shopping patterns was obtained by interviewing persons leaving five selected stores situated at selected locations along Whyte Avenue.[1] The interviewers employed were comrpised of graduate and undergraduate students enrolled in courses in the Department of Geography at the University of Alberta. The interviewers were instructed to approach as many customers leaving the interview stores as possible during the two hour interview periods. This was done in an attempt to gain a large sample of respondents, taking into consideration refusals of customers to be interviewed and customers leaving the store while an interview was in progress.

Selection of Interview Times

The interviewing took place during the week ending March 30th, 1974. This week was selected as interviewers were available prior to the end of the university year, and the spring weather conditions could be expected to be relatively favourable. Limitations in financial resources

---

[1]The term "interview store" will be used in this and the next chapter meaning the store at which interviews were carried out. The term is considered identical to the term "retail establishment," defined in Chapter I of this study.

and time resulted in taking purposive samples of four two-hour interviewing periods during this week. These time periods were selected because they were thought to be a good cross-section of most time situations during a given week. The following periods were selected:

1. Tuesday 10am - 12pm

This time represented an early weekday period immediately prior to the lunch hour. It was anticipated that shopping patterns associated with the majority of customers recorded in this time period would be ascribed to local residents engaged in convenience goods shopping trips.

2. Thursday 7pm - 9pm

This time period occurred when most of the retail outlets, and all of the interview stores along the ribbon, were open for evening shopping. The bakery, however, closed at 8pm as compared with the regular 9pm closing time for the other interview stores.

3. Friday 3pm - 5pm

This time represented an end of week period which included late afternoon shopping and the time before, during and after closing time of most offices in the city. Thus, the shopper on his way home from work could be included in the survey.

4. Saturday 2pm - 4pm

This final period occurred during an afternoon which was observed to be relatively busy compared to several other weekday times. It was also the final shopping afternoon prior to Sunday closing and a time when most offices in the city were closed, thus meaning that office workers were free to shop during this particular period.

These time periods represent a high proportion of the possible temporal situations which occur during a given week. The selection of the interviewing week was related to the availability of reliable interviewers prior to the summer university vacation, and the expected weather conditions. However, during the early part of the interview week, the weather was quite cold, possibly limiting the number of responses obtained for two reasons:

a) people did not shop at Whyte Avenue at all because of the low temperatures and light snow

b) customers would not stop to be interviewed because of the weather conditions.

The latter part of the interview was relatively mild, and this was considered to be a factor contributing to the higher response rate (Table 8), together with the fact that

TABLE 8

Number of Interview Responses

	Army and Navy Department Store		House of Stein		Empress Bakery		Town Talk Fashions		Owl Drug Mart		Row Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Tuesday 10am-12pm	19	36.5	11	21.2	13	25.0	3	5.8	6	11.5	52	
Thursday 7pm-9pm	21	31.8	23	34.8	6	9.1	8	12.1	8	12.1	65	
Friday 3pm-5pm	19	26.4	16	22.2	11	15.3	15	20.8	11	15.3	72	
Saturday 2pm-4pm	12	23.5	10	19.6	8	15.7	16	31.4	5	9.8	54	
Total No.	71		60		38		42		30		241	
%	29.5		24.9		15.8		17.4		12.4		100.0	

Source: Interview Data, 1974.

more people shop on Fridays and Saturdays than earlier in the week.

Selection of Interview Stores

The selection of the interview stores was based on two major criteria, functional type and location. They were chosen to represent a cross-section of the different functional types situated on the Whyte Avenue ribbon. It was recognised that a number of commercial establishments occupied a dominant position along the ribbon in terms of their location adjacent to major arterial roads, and their relative drawing power, while other establishments occupied typical roles as convenience goods, shopping goods and specialty goods outlets.[2] As well, the interview stores selected were distributed along the length of the study area. The rationale behind selecting the stores in this manner was to obtain a sample of functional types from the entire ribbon study area and not confine the distribution to concentrated areas.

The interviews were obtained from the following stores:

1. Army and Navy Department Store

This store was chosen as it was recognised as being

[2]The typical roles implied here relate to the definitions of the terms given in Chapter I.

the most important commercial establishment on Whyte Avenue (Plate 8). Previous studies have indicated its primate position on the ribbon, drawing customers from wide areas,[3] and this function is strengthened by its location at the intersection of one of the major traffic arteries in this sector of the city (104 Street, the urban extension of Highway 2 North). This commercial establishment carries a wide variety of merchandise, ranging from clothing, hardware and stationery to shoes and electrical appliances. It differs from a typical department store such as Hudson's Bay Company or Woodwards in that it relies on high volume sales at very low prices, on selling large quantities of "factory seconds" items, and doing away with the frills associated with large department stores in terms of displays and merchandising techniques.

2. House of Stein

Located towards the central section of the study area, this specialty store retails high-quality, relatively highly-priced stereo and musical equipment, and records and tapes (Plate 11). It was chosen as an example of a

---

[3]See City of Edmonton Planning Department Commercial Strips in Edmonton: Issues and Opportunities Edmonton, 1973. P. 35. Also S. P. Martin Aspects of the Functional Relationship Between Consumers and Commercial Ribbons: A Pilot Study Unpublished Paper, Department of Geography, University of Alberta, 1974.

PLATE 11 The House of Stein

PLATE 12 Owl Drug Mart

commercial establishment retailing specialty goods, as it was felt shopping patterns associated with the store would differ substantially from those associated with convenience and shopping goods stores.

3. Owl Drug Mart

This store is located near the eastern boundary of the study area (Plate 12) and is situated near the intersection of another major traffic artery of South Edmonton (99 Street). It was chosen as one example of a convenience goods store, and is a newer establishment exemplifying much of the commercial redevelopment taking place at various sections of the ribbon. It was assumed that customer movement and shopping patterns associated with this type of commercial establishment would vary from those associated with the department store, specialty goods store or the shopping goods store.

4. Empress Bakery

This commercial establishment was chosen as an interview store for two main reasons. First, it is a further example of a convenience goods store, and second it is located in the planned Strathcona Neighbourhood Centre towards the eastern end of the Whyte Avenue ribbon (Plate 13). It was felt that since the Strathcona centre had been cited in previous studies as a nodal shopping

PLATE 13 Empress Bakery - interview store in the planned Strathcona Neighbourhood Centre

PLATE 14 Town Talk Fashions

location,[4] customer movement and shopping patterns associated with it may differ from the patterns associated with other convenience goods stores on the ribbon.

5. Town Talk Fashions

This commercial establishment was chosen primarily as an example of a specialized shopping goods store. It is located towards the western boundary of the ribbon near the 109 Street intersection, which has also been identified as a shopping node. It was expected that this establishment would attract customers engaged in comparison shopping for women's clothing and fashion goods (Plate 14).

The interview stores selected make up a small sample of all the commercial establishments found along the Whyte Avenue ribbon (Table 5). Limitations imposed by financial resources, obtaining sufficient interviewers, and time, necessitated choosing five stores only as interview locations. However, they were chosen to represent a sample of the varying types of convenience, shopping and specialty goods stores which the literature has identified as being attracted to ribbon locations.

Selection of Interviewees and Nature of the Sample

The interviewers were instructed to approach the

[4] S. P. Martin Ibid.

first person they saw leaving the interview store. After this interview, the selection procedure was repeated, although it was recognised that an element of bias could occur, since interviewers could pick their own subjects. However, in the case of the specialty and shopping goods stores, the expected relatively low frequency of customers made this selection procedure necessary. The actual sample obtained was a convenience sample and, therefore, a non-probability sample,[5] in that not all consumers who were visiting the commercial establishments on the ribbon during the interview times had a reasonable chance of being included in the sample.

This brief discussion has indicated that the selection of the interview stores was based on the subjective judgment of the author. In addition, the statistical representativeness of the sample could not be determined as some interviewers did not record numbers of refusals or customers not interviewed. This was because the large volume of customers at some stores presented little problem in obtaining further interviews. However, the data was considered reliable in terms of the response rates obtained at each store, and the refusals recorded by some interviewers. In view of the

---

[5] B. J. L. Berry Sampling, Coding and Storing Flood Plain Data Agricultural Handbook No. 237, 1962. Pp. 7-14.

general conflict of opinion and variety of approaches used in previous studies of commercial ribbons, the methods were considered justified and the survey worthwhile.

The Customer Interview Survey: Results and Analysis

The Nature of Shopping Trips

The results of how frequently customers interviewed at the five store locations patronise the Whyte Avenue shopping district between 109 and 99 Streets, appear in Table 9. Of the two hundred and forty-one persons interviewed, nearly half stated that they visited Whyte Avenue less than once a week on shopping trips, while a further 24.9% indicated that they shopped there at least once a week. The results obtained for each interview store substantiates this general pattern, although some variations between the different functional types do occur.

The general pattern indicated above is most apparent in regard to both the department store and the specialty goods store. The results for the House of Stein indicate that it caters largely to customers on infrequent shopping trips, while the pattern associated with the Army and Navy Department Store is indicative of its role as a department store usually visited on an ir-

regular basis. These aspects are examined further at a later stage in this chapter.

Conversely, the convenience goods outlets and the shopping goods establishment show a comparatively different pattern with regard to the frequency of patronage. Customers visit the bakery relatively more frequently than the above mentioned establishments, as would be expected for a store retailing goods in high demand. This pattern is not as apparent with regard to the drug store, and in fact those associated with the women's fashion store and the drug store are quite similar. This may reflect the changing nature of the drug store in terms of merchandise sold, although the small sample may account for such a pattern.

Table 10 illustrates the number of establishments visited on frequent shopping trips to Whyte Avenue, including the interview stores, where "frequent" is defined as once a week or more. As would be expected, respondents who indicated that they made frequent shopping trips to the commercial establishments on Whyte Avenue visited two or more shops on such trips, which could be described as being multiple-purpose in nature. No marked deviations from this general pattern were indicated by respondents at the individual store locations.

TABLE 9

Frequency of Shopping Trips to Interview Stores on Whyte Avenue

	Less than once a week		Once a week		Twice a week		More than twice a week		Row Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Army and Navy	38	53.5	18	25.4	7	9.9	8	11.2	71	29.5
House of Stein	34	56.7	8	13.3	7	11.7	11	18.3	60	24.9
Empress Bakery	9	23.7	14	36.8	6	15.8	9	23.7	38	15.8
Town Talk Fashions	19	45.3	10	23.8	4	9.5	9	21.4	42	17.4
Owl Drug Mart	10	33.3	10	33.3	4	13.4	6	20.0	30	12.4
Column Total No.	110		60		28		43		241	
%	45.6		24.9		11.7		17.8		100.0	

Source: Interview Data, 1974.

TABLE 10

Number of Establishments Visited on Frequent Shopping Trips to Whyte Avenue*

	One		Two		Three		More Than Three		Row Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Army and Navy	5	15.2	7	21.2	10	30.3	11	33.3	33	25.6
House of Stein	4	16.7	4	16.7	9	37.5	7	29.2	24	18.6
Empress Bakery	2	6.9	10	34.5	10	34.5	7	24.1	29	22.5
Town Talk Fashions	3	13.0	9	39.1	7	30.4	4	17.4	23	17.8
Owl Drug Mart	2	10.0	6	30.0	7	35.0	5	25.0	20	15.5
Column Totals	No 16		36		43		34		129	
	% 12.4		27.9		33.3		26.4		100.0	

Source: Interview Data, 1974.

*Frequent is defined as once a week or more.

Special Purpose Shopping Trips

As indicated in Chapter II, a number of studies of commercial ribbons have focussed attention on the distinction between "local shopping trips," "through trips," and "special purpose shopping trips" to the commercial establishments located on such conformations. Boal and Johnson, for example, showed that commercial functions located on ribbons are dependent to varying degrees on both "special trips," implying linkages with nearby residential areas, and "through trips" which reflect their function in serving transients.[6] Of the respondents interviewed for this study, 59.8% stated that they did not make special trips to Whyte Avenue for goods and services, while 40.2% replied in the affirmative. Table 11 illustrates the frequency with which respondents made special trips to the interview stores on Whyte Avenue.

The results show that for all the interview stores, the majority of respondents who made such special trips did so less than once a week. This pattern is most clearly defined for the department store, the specialty store, the shopping goods store and one of the convenience goods

---

[6] F. Boal and D. Johnson The Function of Retail and Service Establishments on Commercial Ribbons The Canadian Geographer Vol. 9, 1965. Pp. 154-169.

TABLE 11

Frequency of Special Shopping Trips to Interview Stores on Whyte Avenue

	Less than once a week		Once a week		Twice a week		More than twice a week		Row Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Army and Navy	24	80.0	4	13.3	0	0.0	2	6.7	30	30.0
House of Stein	29	82.9	1	2.9	4	11.4	1	2.9	35	35.4
Empress Bakery	5	55.6	4	44.4	0	0.0	0	0.0	9	9.1
Town Talk Fashions	11	73.3	3	20.0	0	0.0	1	6.7	15	15.2
Owl Drug Mart	8	80.0	0	0.0	2	20.0	0	0.0	10	10.0
Column Total No.	77		12		6		4		99	
%	77.8		12.1		6.1		4.0		100.0	

Source: Interview Data 1974.

establishments. The bakery was the only departure from this pattern, where 44.4% of the respondents made such a trip at least once a week. However, this could be explained by the fact that this particular establishment is renouned in the district for its German-style products, and respondents further indicated that this was the major attraction for the store. Consequently, they were prepared to make special trips there for these products. Table 12 presents the retail goods and services which respondents at the interview stores indicated they purchased on special purpose trips to Whyte Avenue. Three major categories emerge from this list, Other Retail, Apparel and Accessories, and the Food Group, and it is significant to note that the five interview stores fall into one of these categories. Hence, consumers who make special-purpose shopping trips to Whyte Avenue generally visit such stores as sporting goods stores, jewellers, book stores, music stores, leather and hobby stores, meat markets, the bakery, drug stores, the department store and clothing stores.

Origins and Destinations of Shopping Trips to Whyte Avenue

Information regarding the origin and destination of respondent's shopping trips to the five interview stores on Whyte Avenue is presented in Tables 13, 14 and 15.

TABLE 12

Retail Goods and Services Purchased on Special Purpose Trips to Whyte Avenue

	Absolute Number	Percentage	Cumulative Percentage
Other Retail	39	39.4	39.4
Apparel and Accessories	25	25.3	64.7
Food	20	20.2	84.9
General Merchandise	9	9.1	94.0
Automobile	2	2.0	96.0
Miscellaneous Services	2	2.0	98.0
Personal Services	1	1.0	99.0
Finance	1	1.0	100.0
Total	99	100.0	

Source: Interview Data 1974.

TABLE 13

Respondent's Origins of Shopping Trips
to Interview Stores on Whyte Avenue

	Home		Work		Row Total	
	No.	%	No.	%	No.	%
Army and Navy	59	83.1	12	16.9	71	29.6
House of Stein	46	76.7	14	23.3	60	25.0
Empress Bakery	24	63.2	14	36.8	38	15.8
Town Talk Fashions	31	75.6	10	24.4	41	17.1
Owl Drug Mart	21	70.0	9	30.0	30	12.5
Column Total						
Number	181		59		240	
%	75.4		24.6		100.0	

Source: Interview Data 1974.

In all cases, the majority of respondents indicated that they began their shopping trip from home. Over 75% of those interviewed at the department store, specialty goods store and shopping goods store began their shopping trip from home, with the remaining 25% originating from work. The convenience goods stores also received the majority of their patronage from consumers who began their shopping trip from home, but the proportion is slightly lower. This could be explained by the fact that a number of those interviewed whose trip origin was work, in fact work along Whyte Avenue or immediately adjacent to it.

Destinations of respondents after shopping trips to the interview stores are illustrated in Table 14. Nearly 70% of the respondents indicated that their destination would be home after their shopping trip, while other shops on Whyte Avenue accounted for a further 14.9% of the respondent's answers. The remaining destinations were comprised of work, university, downtown, a regional shopping centre or elsewhere (visiting friends, church, or hospital).

The distances customers travelled to each of the interview stores is illustrated in Table 15. It is apparent from this that the interview establishments on the ribbon serve both local clientele, living or working within one mile of the strip, and customers originating from

TABLE 14

Destinations of Respondents after Shopping Trips to Interview Stores on Whyte Avenue

	Army and Navy		House of Stein		Empress Bakery		Town Talk Fashions		Owl Drug Mart		Row Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Home	48	67.6	48	80.0	27	71.1	31	73.8	14	46.7	168	69.7
Other Shops on Whyte Avenue	14	19.7	6	10.0	5	13.2	3	7.1	8	26.7	36	14.9
Work	6	8.5	1	1.7	5	13.2	3	7.1	4	13.3	19	7.9
University	1	1.4	2	3.3	0	0.0	5	11.9	1	3.3	9	3.7
Downtown	0	0.0	1	1.7	0	0.0	0	0.0	1	3.3	2	0.8
Regional Shopping Centre	1	1.4	0	0.0	1	2.6	0	0.0	0	0.0	2	0.8
Elsewhere	1	1.4	2	3.3	0	0.0	0	0.0	2	6.7	5	2.1
Column Total												
Number	71		60		38		42		30		241	
%	29.5		24.9		15.8		17.4		12.4		100.0	

Source: Interview Data 1974.

TABLE 15

Distance Travelled by Respondents from Origin of Shopping Trip to Interview Store

	Army & Navy		House of Stein		Empress Bakery		Town Talk Fashions		Owl Drug Mart		Total	
	Home	Work	Home	Work	Home	Work	Home	Work	Home	Work	Home	Work
0 - 1/2 mile	7	2	13	1	10	7	18	2	15	4	63	16
1/2 - 1 mile	7	1	10	7	1	1	0	6	2	0	20	15
1 - 1 1/2 miles	7	2	3	0	2	0	3	1	2	0	17	3
1 1/2 - 2 miles	1	2	1	0	2	3	1	1	0	3	5	9
More than 2 miles	22	2	8	2	6	2	9	0	0	1	45	7
Column Total Number	44	9	35	10	21	13	31	10	19	10	150	50

Source: Interview Data 1974.

areas greater than two miles distant. This implies a two-fold function of the establishments located on Whyte Avenue; to serve local, home-based customers, as well as the more distant, automobile-based clientele.

Figures 13 to 22 illustrate a number of features related to the origins and destinations of respondents at the five interview stores.

1. Army and Navy Department Store

The pre-eminance which this particular commercial establishment enjoys on Whyte Avenue is clearly illustrated in Figures 13 and 14. Figure 13 shows the wide trading area from which this store attracts customers whose origin is either home or work. Customers are drawn not only from surrounding residential areas, but from the more distant sectors of the city such as Sherwood Park, Southgate, Petrolia and North Edmonton.

In terms of the destinations of respondents after their shopping trip to Whyte Avenue, there is no marked departure from the pattern discerned for their origins. As indicated in Tables 13 and 14, 83.1% of the respondents began their shopping trip from home, and 67.6% returned home after this trip. Visits to other shops on Whyte Avenue and returning to work accounted for the other major destinations of shoppers from this interview store.

Source: Interview Data

The majority of respondents travelled a distance of more than two miles from their origin to the department store. Local customers living within one half mile from the store make up only a minor proportion of the total clientele, as do those respondents originating from within each of the other distance classes.

2. House of Stein

Trip origin and destination patterns associated with this specialty goods store differ slightly from those associated with the other interview stores. Figure 15 shows that this establishment attracts clientele from both surrounding residential areas and from areas more distant from the ribbon. The nature of the products sold in this particular store and the type of clientele who shop here account for this pattern.

Because of its proximity to the university, the location of students in nearby residential areas and the high quality electronic equipment, as well as a wide selection of records and tapes sold in this establishment, it attracts a large number of students. This would largely account for local customers whose home and work origins and destinations were from surrounding residential areas and the university campus. Customers from more distant areas, such as Southgate and Sherwood Park, are at-

tracted by the type of merchandise sold. Table 13 indicates that 76.7% of the respondents began their shopping trip from home, while the remaining 23.3% originated from work (the university was included in this classification). Table 14 shows that 80.0% of the respondent's destinations centered on home, with the remaining 20.0% shared between other stores on the ribbon, the university and other destinations.

Table 15 illustrates that the majority of respondents originated from residential and working locations within one mile of the store. This would include residents of nearby high-rise and walk-up apartment complexes, and customers originating from the university. The number of customers travelling from origins at a distance of greater than two miles from the store also indicates the large trading area which this specialty store encompasses.

3. Empress Bakery

Respondent origin and destination patterns associated with this convenience goods store differ markedly from the expected local trading area orientation. A large proportion of respondents (63.2%) indicated that they began their shopping trip from home, while the remaining 36.8% began their trip from work. The majority also stated that their destination following this parti-

FIGURE 15
ORIGINS OF SHOPPING TRIPS TO HOUSE OF STEIN

FIGURE 16
DESTINATION AFTER SHOPPING TRIPS TO
HOUSE OF STEIN

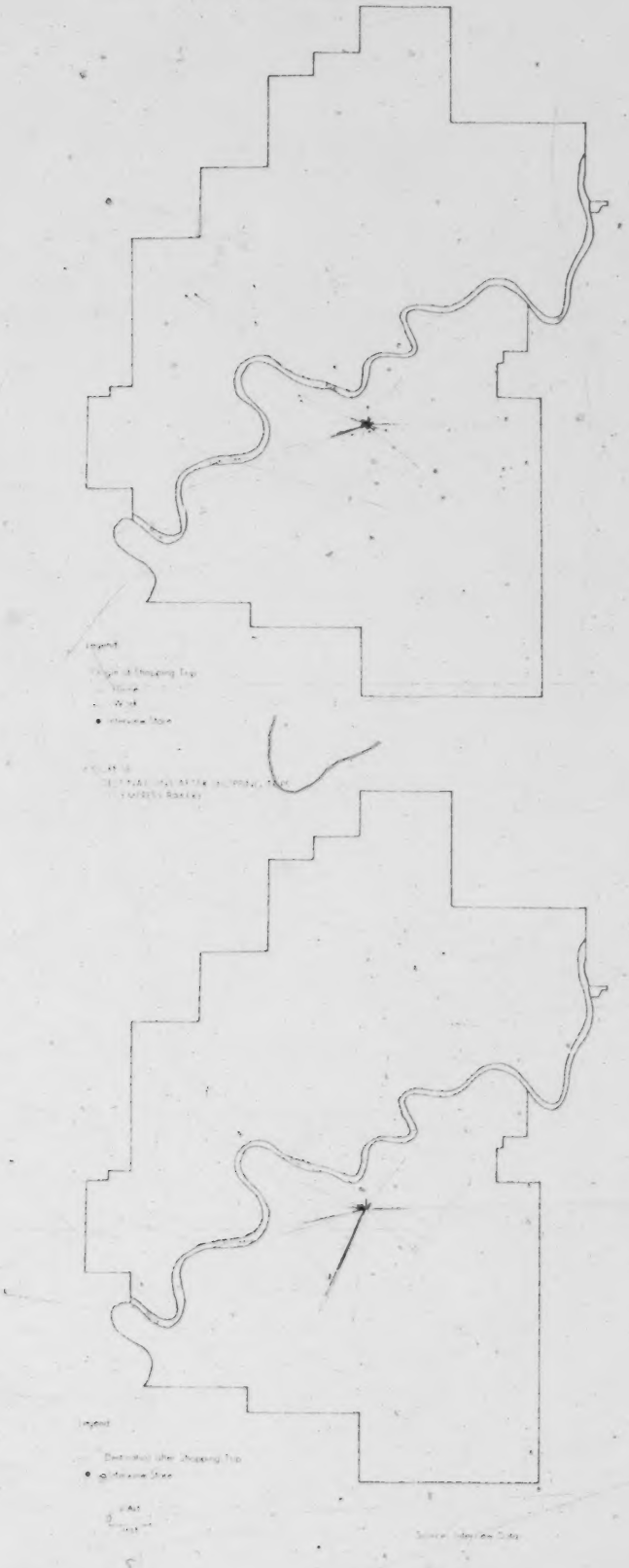
Source: Interview Data

cular trip would be home, with the remaining 28.9% returning to work, or proceeding to other shops on Whyte Avenue to shop or to work.

Figure 17 illustrates that this retail establishment enjoys a relatively wide trading area for a convenience goods store. Local customers are derived from nearby residential areas and people who work in close proximity to the store (within one half mile), but a large portion of the store's clientele comes from areas greater than one and one half miles distant, such as Southgate, Petrolia and Sherwood Park.

Similarly, destinations indicated by respondents show a widely dispersed pattern (Figure 18). Local residential areas and places of work such as other shops on Whyte Avenue, account for some of these, but a large number of destinations are far removed from the store's immediate area. The drawing power and enlarged trading area possessed by this convenience goods outlet is a function of the merchandise sold and the ethnic background of the people from nearby residential areas. There is a strong German-oriented enclave present in this sector of the city, and this has been reflected in the types of goods sold in adjacent retail stores.

FIGURE 17
ORIGINS OF SHOPPING TRIPS TO EMPRESS BAKERY

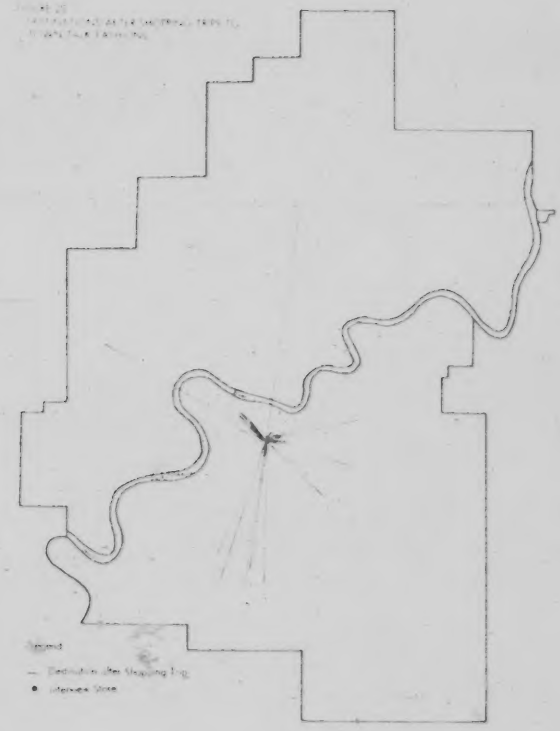


4. Town Talk Fashions

This example of a shopping or comparison goods store displays similar respondent origin and destination patterns as those accruing to the specialty goods store, with 75.6% of the respondents beginning their shopping trips from home, and the remaining 24.4% from work. A similar pattern is reflected in terms of their destinations following the shopping trip, as illustrated in Table 14. Home accounts for 73.8% of the destinations, with work, university and other shops on Whyte Avenue making up the difference.

Figure 19 presents the origins of shopping trips to this establishment from home and work. It can be seen that the store attracts the majority of its patronage from surrounding residential areas within one half mile of the store. The university and more distant areas also account for origins of customers. Destinations following these trips coincide to a marked degree with the origins, as illustrated in Figure 20. The types of goods sold in this establishment, which usually entails comparison shopping by customers, accounts for the attraction of the store to people from more distant areas. Its location near a major through traffic artery (109 Street) also strengthens this function.

FIGURE 19
ORIGINS OF SHOPPING TRIPS TO
TOWN TALK FASHIONS

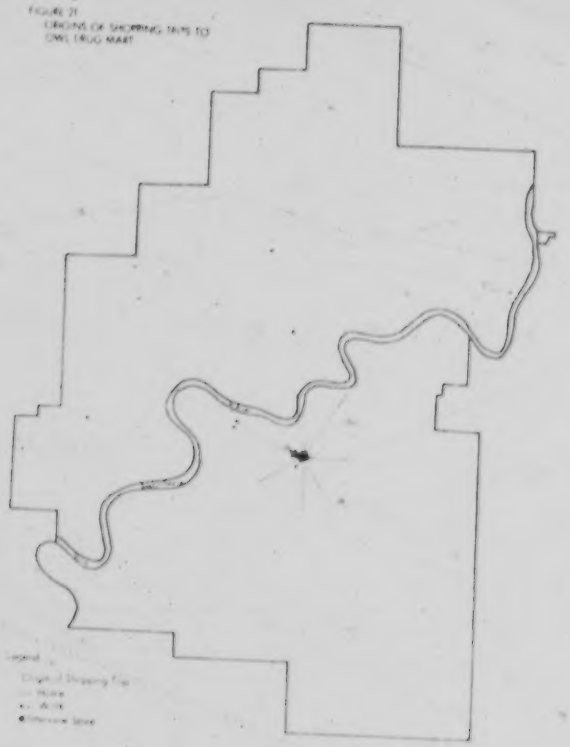


Source: Interview Data

5. Owl Drug Mart

This example of a convenience goods outlet indicates the typical trading area usually ascribed to these functions. Figure 21 shows that this establishment is highly patronised by customers residing or working in close proximity, although a few minor variations do occur. However, the areas from which customers are drawn are by no means as great as for the specialty goods, shopping goods or department store. Table 13 shows that 70% of the respondents originated from home and 30% from work on this particular shopping trip.

Respondent's destinations following the shopping trip, however, differed substantially from the other four interview stores. As seen in Table 14, only 46.7% of the respondents indicated that home was their destination, while others were divided between work (four), university (one) and downtown (one). A further 26.7% stated that they intended to visit other shops on Whyte Avenue, but this could be regarded as an intra-shopping trip linkage rather than a trip destination. This pattern is illustrated in Figure 22, and may be explained by the fact that customers from nearby residential areas either made a special trip to the store to purchase a particular product (strengthening its convenience function), or that they combined shopping at this establishment with visiting other



stores on the ribbon.

It may be concluded from the above discussion that patterns of consumer movement associated with origins and destinations of shopping trips to the interview establishments vary between the different functional types under examination. Each store has a particular set of origin and destination patterns which, in most cases, reflect the convenience, shopping goods, specialty goods or department store function of each of the interview stores. Some similarities exist, particularly in regard to origins of trips in terms of home or work, but each functional type may be regarded as having a separate shopping trip pattern associated with it.

Transportation Modes Used by Respondents

An aim of this study was to ascertain how consumers commute between the origin of their shopping trip and the interview stores, and whether the automobile-oriented nature of the Whyte Avenue ribbon could be substantiated.

Table 16 illustrates the mode of transportation used by respondents between their shopping trip origin and the interview store. Of those interviewed, 46.3% indicated that they arrived by car, while 35.0% arrived on foot and a further 14.6% by bus. Only 4.2% arrived

TABLE 16

Mode of Transportation Used Between Shopping Trip Origin and Interview Store on Whyte Avenue

	Car Driver		Walk		Bus		Car Passenger		Row Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Army and Navy	35	49.3	15	21.1	16	22.5	5	7.0	71	29.6
House of Stein	34	56.7	21	35.0	4	6.7	1	1.7	60	25.0
Empress Bakery	24	63.2	11	28.9	2	5.3	1	2.6	38	15.8
Town Talk Fashions	12	29.3	19	46.3	8	19.5	2	4.9	41	17.1
Owl Drug Mart	6	20.0	18	60.0	5	16.7	1	3.3	30	12.5
Column Total Number	111		84		35		10		240	
%	46.3		35.0		14.6		4.2		100.0	

Source: Interview Data 1974.

as a car passenger. However, some marked variations occurred with regard to transportation modes used when comparing the individual stores.

It could be expected that a convenience goods outlet would attract largely pedestrian-oriented customers from nearby residential areas. Where this is largely true for the drug store, there is a notable departure from the norm in the case of the bakery. Here, over 63% of the respondents indicated that the car was their chief mode of transportation to this convenience goods store, whereas only 28.9% arrived on foot. This may be accounted for in terms of the reasons outlined above in explaining customer origin and destination patterns, and by the fact that off-street parking facilities are provided as part of the planned neighbourhood centre, of which the bakery is a part. Similarly, the high proportion of the respondents who walk to the women's fashion store could be explained in terms of the large numbers of students and other local customers who reside or work in close proximity. Those customers coming from greater distances would arrive by car or bus.

Transportation patterns discernible for both the department and the specialty store indicate their roles in drawing customers from wide areas as well as local clientele living in surrounding residential areas. Respondents

indicated that the car was the chief means of transportation to the interview store, with walking of secondary importance, and attributable to customers residing or working nearby. The large proportion of bus commuters to the department store would appear to be related to the existence of a bus stop in front of the store.

However, when commuting between establishments on Whyte Avenue, the majority of respondents indicated that they preferred to walk, except when visiting stores at opposite ends of the strip. In such cases, the bus or automobile provided the mode of transportation used. The results of this investigation are presented in Table 17.

Parking preferences of respondents also differed quite noticably between interview establishments, as seen in Table 18. For the department store, the majority preferred to park in the store's parking lot or anywhere that was possible. For the specialty goods store and the bakery, the automobile-oriented clientele of these functions preferred to park as close as possible to the store to be visited, such as the off-street parking area to the front of the Strathcona Centre, anywhere along the ribbon, or anywhere that was possible. Those respondents visiting the shopping goods store however, had no particular preference, but indicated that they attempted to park anywhere possible or anywhere along the ribbon. The

TABLE 17

Mode of Transportation Used by Respondents When Commuting Between Commercial Establishments on Whyte Avenue

	Absolute Number	Percentage
Walk	193	80.1
Drive Car	42	17.4
Bus	6	2.5
Total	241	100.0

Source: Interview Data 1974.

TABLE 18

Respondent's Parking Preferences for Whyte Avenue

	As Close as Possible to Shop Visited		Anywhere Possible		Anywhere Whyte Avenue		Behind Army & Navy		Row Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Army and Navy	11	19.6	19	33.9	7	12.5	19	33.9	56	34.6
House of Stein	19	45.3	8	19.0	13	31.0	2	4.8	42	25.9
Empress Bakery	21	63.6	6	18.2	2	6.1	4	12.1	33	20.4
Town Talk Fashions	3	17.6	7	41.2	4	23.5	3	17.6	17	10.5
Owl Drug Mart	9	64.3	2	14.3	0	0.0	3	21.4	14	8.6
Column Total										
Number	63		42		26		31		162	
%	38.9		25.9		16.0		19.2		100.0	

Source: Interview Data 1974.

majority of respondents at the drug store indicated that they preferred to park as close as possible to the shop to be visited, or if they were shopping elsewhere along the ribbon, behind the department store.

Dominance of Sections of Whyte Avenue

An important aspect of this study was concerned with the concept that certain groups of shops or sections of Whyte Avenue form nodal or "bead" locations along the ribbon, and subsequently form and function as nucleated shopping centres. Of the two hundred and forty one consumers interviewed, 69.7% confirmed that there was a particular section or group of shops which they visited more frequently than others, while the remaining 30.3% stated such locations did not exist.

Table 19 outlines the location of the particular sections of the ribbon visited more frequently than others, as indicated by the respondents at the interview stores. The street intervals in Table 19 were selected since two of the interview stores occurred between each of the 99-101 Streets and 107-109 Streets intervals, and the other between the 104-106 Streets interval. As well, the 99-101 Streets and 104-106 Streets sections had been cited as nodal locations in previous studies,[7] and the other two

[7]City of Edmonton Planning Department Op. cit.

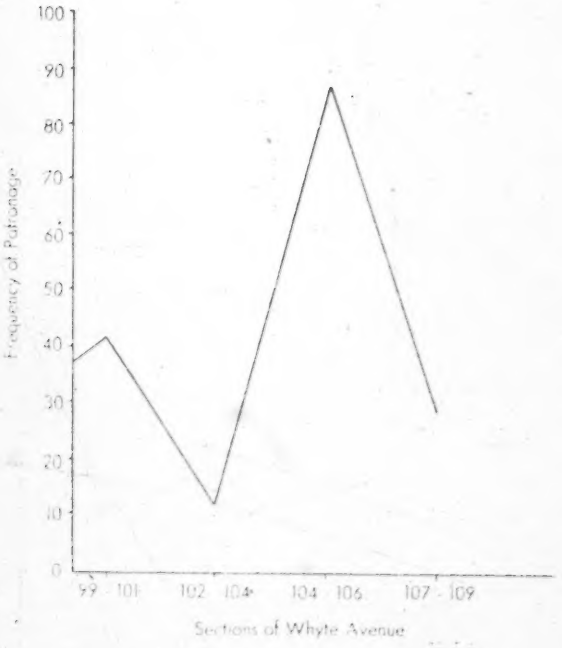
TABLE 19

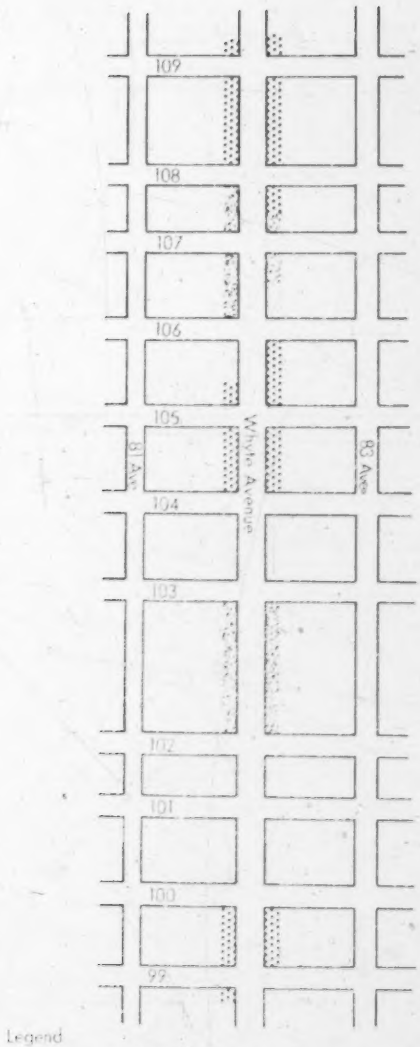
Location of Frequently Visited Sections of Whyte Avenue

	99-101 St.		102-104 St.		104-106 St.		107-109 St.		Row Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Army and Navy	3	6.5	6	13.0	36	78.3	1	2.2	46	27.4
House of Stein	2	5.4	2	5.4	26	70.2	7	18.9	37	22.0
Empress Bakery	23	76.6	1	3.3	5	16.7	1	3.3	30	17.9
Town Talk Fashions	2	6.1	2	6.1	12	36.3	17	51.5	33	19.6
Owl Drug Mart	12	54.6	0	0.0	8	36.4	2	9.1	22	13.1
Column Total										
Number	42		11		87		28		168	
%	25.0		6.5		51.8		16.7		100.0	

Source: Interview Data 1974.

FIGURE 23
FREQUENCY OF PATRONAGE OF SECTIONS OF WHYTE AVENUE





Legend
Frequency of Patronage
High Frequency
Medium Frequency
Low Frequency

Source: Interview Data

intervals bridged the gaps along the study area.

The majority of respondents at the department store and the specialty store indicated that the 104-106 Street section, centering on the department store itself and adjacent fabric stores, drug stores, book stores and jewellers, was the most frequently visited section of Whyte Avenue. Respondents at the bakery and the drug store indicated that stores located between 99 Street and 101 Street, including the Strathcona Neighbourhood Centre, dominated their patronage, while those interviewed at the shopping goods store, indicated that 106 to 109 Streets was visited more frequently than other sections. In all cases, the 102-104 Street section was the least frequented section of the ribbon.

The majority of respondents (73%) also indicated that there was a particular reason why these sections of Whyte Avenue were so highly patronised, and these reasons are summarised in Table 20. Shopping facilities offered and proximity to home were the two major reasons given by respondents, accounting for 59.1% and 33% of the total, respectively. There were no marked variations to this pattern between interview stores, although a number of observations may be made regarding each.

Shopping facilities offered was the major attraction for respondents at the department store, the bakery

TABLE 20

Respondent's Reasons for Visiting Particular Sections of Whyte Avenue More Frequently than Others

	Shopping Facilities Offered		Nearness to Home		Parking		Other		Row Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Army and Navy	32	65.3	13	26.5	1	2.0	3	6.1	49	27.8
House of Stein	19	48.7	18	46.2	0	0.0	2	5.1	39	22.1
Empress Bakery	23	69.7	6	18.2	1	3.0	3	9.1	33	18.8
Town Talk Fashions	15	45.5	14	42.4	0	0.0	4	12.1	33	18.8
Owl Drug Mart	15	68.2	7	31.8	0	0.0	0	0.0	22	12.5
Column Total										
Number	104		58		2		12		176	
%	59.1		33.0		1.1		6.8		100.0	

Source: Interview Data 1974.

and the drug store, with proximity to home being of secondary importance. However, for both the specialty goods store and the shopping goods store, opinions were evenly divided between these two reasons. This pattern could be explained in terms of the patronage that both stores receive from nearby residents, as indicated in Figures 13 to 22.

Whyte Avenue as an Intervening Opportunity

As outlined in Chapter 1, a further aim of this study was to examine the concept of the Whyte Avenue ribbon between 99 Street and 109 Street acting as an intervening opportunity for customers living in South Edmonton who have to cross the avenue to reach some original shopping destination, such as downtown. It was recognised that since three major access roads from South Edmonton traversed Whyte Avenue (99 Street, 104 Street and 109 Street), connecting this part of the city to Northern Edmonton, the study area may intercept some of this otherwise through traffic and verify this assumption.

However, the results obtained from the customer interview questionnaire do not permit firm conclusions to be drawn in this regard. Of the two hundred and forty one persons interviewed, only seventy nine of those who gave their home address lived south of Whyte Avenue, and

could be expected to adopt this pattern of shopping behaviour (Figure 24). Therefore, only these customers could answer the question regarding preference for shopping at Whyte Avenue instead of elsewhere, where the shopping trip involved traversing the study area.

Of the seventy nine valid responses, thirty replied that if travelling to some original shopping destination and they had to traverse Whyte Avenue, they would shop there instead, while forty nine responded in the negative. Table 21 outlines the major reasons cited as to why these customers would shop at Whyte Avenue instead of travelling downtown. Nearness to home and knowledge of stores and goods in the study area were most frequently given as the major reasons prompting their shopping decision, with parking considerations, fewer people and nearness to work also given as reasons.

Summary

This chapter has concentrated on presenting the results of the consumer questionnaire in terms of the stated aims of the study. It has examined consumer trips to the Whyte Avenue ribbon between 99 Street and 109 Street in terms of the type of shopping trips, and transportation modes used. It has also identified the occurrence and location of sections of the ribbon which may

FIGURE 24

HOME ADDRESS OF RESPONDENTS LIVING SOUTH OF WHITE AVENUE WHO PREFER TO SHOP AT WHITE AVENUE

Source: Interview Data

TABLE 21

Respondent's Reasons for Preferring to Shop at Whyte Avenue instead of Travelling Downtown

	Absolute Numbers	Percentage
Nearness to Home	15	50.0
Knowledge of Stores and Goods	9	30.0
Parking	4	13.4
Fewer People	1	3.3
Nearness to Work	1	3.3
Total	30	100.0

Source: Interview Data 1974.

be regarded as shopping nodes, and has investigated the concept of Whyte Avenue acting as an intervening opportunity for residents living south of the strip. The final chapter analyses this information in terms of the hypotheses outlined in Chapter I, derives conclusions from this study, and presents suggestions for further research.

CHAPTER V

SUMMARY AND CONCLUSIONS

This study has been concerned with examining customer movement and shopping patterns associated with the Whyte Avenue commercial ribbon between 99 Street and 109 Street. It has been a consumer-oriented analysis, designed to complement previous studies of strips which, for the most part, described consumer patterns based on subjective judgments made by store operators.

In order to facilitate this analysis, an interview survey was administered to shoppers at a selected sample of commercial establishments along Whyte Avenue. The interview stores were chosen to represent a cross-section of the various functional types of commercial establishments located on the ribbon, and were comprised of a department store, a specialty goods store, a shopping goods store, and two convenience goods outlets. Several important facts regarding consumer movement and shopping behaviour emerge from this study.

The Nature of Shopping Trips

The first hypothesis formulated in this study

stated that shopping trips to the Whyte Avenue ribbon are of two types:

(a) "through customer trips" which are of short duration and for single, special purposes,

(b) "local customer trips," both multi-purpose and single purpose, made by residents of surrounding residential areas.

An examination of the origin and destination maps presented in Figures 13 to 22 reveal that in the main there are two major groups of consumers which dominate the patronage of the interview stores on the ribbon -- local customers residing within one half mile of the interview stores, and those originating from more distant areas, often exceeding two miles. For each functional type of interview establishment, this general pattern is most pronounced. The convenience goods stores derive their patronage largely from local customers who are engaged in both single purpose and multi-purpose shopping trips, although in the case of the bakery, through customers are also important. This latter group is comprised of customers, usually automobile-oriented, who travel greater distances to this convenience outlet largely because of the nature of the products sold and the availability of adequate off-street parking.

Movement patterns ascribed to the shopping goods

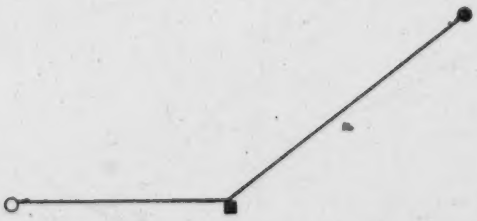
store, specialty goods store and the department store reflect the through customer nature of the majority of shopping trips associated with these types of functions. In the main, customers are drawn to these establishments from distant areas and often make special purpose trips to purchase the merchandise offered by each store, and are usually automobile-oriented. However, variations to this pattern do occur. Because of the merchandise sold in the specialty goods store and shopping goods store (stereo equipment and records in the former, women's clothing in the latter) and because of the presence of large numbers of university students in surrounding residential areas, local residents are important customers for these particular commercial establishments. These local customers are usually pedestrian-oriented, and reside within one half mile of the study area.

Destination patterns associated with each of the five interview stores indicate the type of trip in which customers most frequently engage. At the drug store where local customer trips dominate, destinations are indicative of both single and multi-purpose shopping trips, since customers travel from home to store to home, or from home to store to other stores (or some other destination) to home. These simple origin and destination linkages are represented in Figure 25. The other esta-

FIGURE 25
SIMPLE ORIGIN AND DESTINATION RELATIONSHIPS

CASE A

CASE B



Legend

- ● Origin of Shopping Trip
- o Destination after Shopping Trip
- ■ Interview Store

blishments show similar patterns, although not to the same degree. Single, special purpose shopping trips dominate for the department store, shopping goods store and specialty goods store. Customer movement patterns associated with the bakery tend to be a combination of both these patterns.

Transportation modes used by customers provides an insight into the distinction between through customer and local customer trips. The use of the automobile as the principle mode of transportation between the shopping trip origin and the interview store is most pronounced with regard to the department store, the specialty goods store, and one of the convenience goods stores, the bakery. Two of these establishments, the department store and the bakery, have their own parking areas (in the case of the bakery, as part of the planned Strathcona neighbourhood centre) and this may encourage automobile usage. Walking dominates customer transportation patterns for the drug store and the shopping goods store, although large numbers of local residents, including university students, also walk to the specialty goods store.

However, this does not negate the possibility that local customer trips are made by automobile. It was found that many local customers living within one half

mile of the commercial establishments along the study area, used the automobile as the main mode of transportation for shopping trips to the ribbon.

On the basis of these observations, it would appear that Hypothesis I is acceptable. There are two distinct types of shopping trips made by consumers to the Whyte Avenue ribbon. Local customer trips are both single in nature, and are made by residents of surrounding residential areas within one half mile of the study area. In the main, they are dominated by pedestrian-oriented customers, although automobile-oriented clientele are also important. Through customer trips are attributable to customers living at greater distances from the commercial establishments located on the ribbon, who generally engage in single, special purpose shopping trips. In the main, these customers are automobile-oriented and originate from areas at a distance of two miles or more from the study area. Some overlap may occur between these two distinct groups as each assumes some of the characteristics ascribed to the other. However, generally, customer movement to the Whyte Avenue ribbon may be described in terms of one of these two patterns.

Location of Functional Nodes

In this study, a node or nodal location has re-

ferred to a cluster or group of commercial establishments which attract large volumes of customers, and which subsequently functions as a nucleated shopping district. Hypothesis II stated that

> Certain functional nodes are recognisable, and function as nucleated shopping areas servicing both through customers and local customers.

The majority of respondents in the interview survey indicated that there were certain sections of the Whyte Avenue ribbon that they visited more frequently than others. The most important section occurs between 104 and 106 Streets, which contains the department store situated on one of the major traffic arteries in this part of the city (104 Street), as well as many new and established commercial buildings. The stores in this cluster cater to local customers from nearby high-rise and residential areas, and more importantly, to through customers who make special purpose shopping trips.

Two other sections appear also. The first is between 99 Street and 101 Street, containing the two convenience goods interview stores. Within this section, the Strathcona Neighbourhood Centre, a planned shopping complex with frontal off-street parking, is most important. This contains the bakery, a supermarket, travel agent, men's fashion store and a shoe store and, as with

the drug store, is located near another important traffic artery (99 Street). Most of the clientele for these stores is derived from surrounding residential areas, although the availability of off-street parking, the merchandise sold, and the stores' location on the traffic artery, increases the bakery's attractiveness to automobile-oriented consumers. This also applies to the drug store opposite.

There also appears to be a strong functional linkage between several of the stores in this section of the ribbon because of the ethnic background of the local residents. For example, as well as the bakery, a delicatessen and meat market near 100 Street all sell German style products. The majority of those interviewed at the bakery were noted by the interviewers to be of German origin, although this view is largely subjective.

The second section occurs between 107 Street and 109 Street where the other two interview stores are located. Interviews suggest that local customers are comprised mainly of university students living in surrounding high-rise and walk-up apartments. Through customers originate from areas greater than two miles distant, such as Southgate, Sherwood Park and Petrolia. Stores located in this cluster include restaurants, banks, food stores and clothing stores, and again this cluster forms around an important traffic artery (109 Street).

In most cases, those respondents who conceded that these nodal locations did exist offered two main reasons why they visited these sections of the ribbon more than others. Either customers had some knowledge of the stores in the cluster or the types of goods available, or because these stores were close to home. Clearly, particular sections of the ribbon dominate the shopping patterns of both through customers and local customers, and each of these sections possesses internal functional linkages and store mixes to enable each to function as a nucleated shopping centre. Therefore, it would appear that Hypothesis II may be accepted, since customers identified certain sections of the ribbon that they visit more frequently than others and suggested that these shops catered to their needs. Particularly with regard to the section between 104 Street and 106 Street this holds true, and the other two clusters show a similar pattern.

Whyte Avenue as an Intervening Opportunity

Hypothesis III was formulated to test the proposition that the Whyte Avenue ribbon acts as an intervening opportunity for customers on shopping trips originating from south of the ribbon, who have to traverse Whyte Avenue to reach another shopping destination, such as Downtown. Three major traffic arteries cross the Whyte Avenue ribbon (99 Street, 104 Street and 109 Street) linking South

Edmonton with the northern sections of the city, so it could reasonably be expected that people living south of the ribbon, when travelling north to Downtown, would have to cross the strip to reach their original shopping destination.

The indication from the survey is that only people living close to Whyte Avenue or those who know what shops are located there or products are available, would shop along the ribbon in preference to continuing their journey Downtown or to some other northerly shopping location. Most customers interviewed had reasonably defined ideas as to where to shop, and the fact that they had to cross Whyte Avenue did not influence their shopping decision. However, it is clear from the respondents' replies that Whyte Avenue does take away some customers from Downtown who would otherwise be through traffic, but the magnitude of this effect cannot be judged with any degree of accuracy from such a small sample. Indeed, many of the respondents living in close proximity to the ribbon would probably shop there because of convenience, and the question of the strip acting as an intervening opportunity may not be as relevant to them as to those customers residing at greater distances from the ribbon.

Conclusions

From the review of the literature presented in Chapter II of this study, there is a wide consensus among urban geographers as to what functionally constitutes a commercial ribbon. Stemming from this working definition have been subjective judgments as to the ways consumers utilise these elements of a city's commercial structure.

This study has investigated several major facets of commercial ribbons from a consumer perspective, endeavouring to explain customer movement and shopping patterns, and the formation of functional nodes along the ribbon, in terms of customer interview responses. From the evidence presented, it may be concluded that Whyte Avenue serves the needs of both local customers and through customers for various types of merchandise sold in a cross-section of functional types on the ribbon. As well, certain stores and clusters of establishments dominate the ribbon at nodal locations, centering on major traffic arteries, and service both these local and through customers.

Finally, conclusions as to whether the ribbon possesses an interceptor function, acting as an intervening opportunity for customers travelling from South Edmonton to Downtown, can only be general. It appears that some otherwise through traffic is drawn off by the

ribbon establishments, but the significance of the results is difficult to test. It was felt that this was due mainly to the fact that some customers, as well as some interviewers, were not totally clear as to what this question in the consumer survey was actually seeking.

Suggestions for Further Research

This study has been confined to a specific investigation of a well-developed commercial ribbon which has already been the subject of considerable research. However, it must be asked what do the results of this particular study indicate regarding the nature of commercial ribbons generally? Is this type of study applicable to other ribbon developments in this or any other study?

It should be stated that this study has been an attempt to fill in a number of gaps in previous research, examining the Whyte Avenue ribbon from a consumer perspective. This, in itself, indicates a much neglected aspect of retail structure, particularly with regard to commercial ribbons, which must be carefully integrated into any future studies of their form and function. The methods used to examine customer movement patterns, the formation of functional nodes and the possibility of a ribbon acting as an intervening opportunity would appear to be adequate for such an analysis, and applicable to other similar ribbon

situations. This assumes some modifications, such as movement classifications, may be necessary to cater for individual differences, but the basic aims of the study should be widely applicable.

Therefore, since this study has attempted to bridge some of the gaps between this and previous studies of commercial ribbons, it is recognised that a number of possible directions for further research emerge, which may add further insight into the relationship between consumer behaviour and the commercial functions located on ribbons.

With regard to the study area itself, a number of opportunities for further research present themselves. First, the sample of interview stores could be expanded to include a "service" business such as a real estate agent or finance firm. A major difficulty associated with this is that of interviewing customers on the street, since many of these types of businesses have a second-storey location. Second, the study could be expanded to include an analysis of the time periods used for the interviews. In this way, temporal changes in patterns of shopping and movement during a given week may be discerned, and perhaps other time periods added to cover all those available during a given shopping week.

A major field for further research centres on the shopping district located at 104 Street and extending down to 80 Avenue. This area contains Prudham's Shoppers Park, a larger supermarket, and numerous commercial establishments covering a large area. As well, sizeable car parking space is available, and this commercial district straddles the 104 Street artery which links South Edmonton to the northern portions of the city. The development of this area is perhaps eroding the ribbon-like character of the adjoining section of Whyte Avenue, and causing it, more than any other location on the strip, to function as a nucleated shopping centre.

Other research possibilities emerge concerned with commercial ribbons in general. A comparison between the study area and another commercial ribbon within the City of Edmonton would be desirable. This would, hopefully, consolidate many of the conclusions derived in this study, and cater for universal application of similar descriptions of consumer movement and shopping patterns. Second, an in-depth investigation of a newer ribbon area in the city, previously not the subject of research, should be encouraged. By analysing such an area in terms of a combined consumer and business operator orientation, this may facilitate a more generalised description of all commercial ribbons. A final study could compare two similar

functional types, one located within a known node on a ribbon, and the other located outside such a conformation to indicate similarities in consumer movement and shopping patterns.

BIBLIOGRAPHY

AMBROSE, P. An Analysis of Intra-urban Shopping Patterns
Town Planning Review, Vol. 38, 1968.
Pp. 327-334.

BACON, R. An Approach to the Theory of Consumer Shopping Behaviour
Urban Studies, Vol. 8, 1971. Pp. 55-64

BELLO, F. The City and the Car in The Exploding Metropolis edited by Fortune Magazine, Garden City, New York, 1958. Pp. 53-80

BERRY, B.J.L. Ribbon Development and the Urban Business Pattern Annals of the Association of American Geographers Vol. 49, 1959. Pp. 145-159

- Sampling, Coding and Storing Flood Plain Data Agricultural Handbook No. 237, 1962. Pp. 7-14

- Commercial Structure and Commercial Blight Department of Geography, University of Chicago, Research Paper No. 85, University of Chicago Press Chicago, 1963

- The Retail Component of the Urban Model Journal of the American Institute of Planners Vol. 31, 1965. Pp. 150-155

- Geography of Market Centres and Retail Distribution Prentice-Hall, Englewood Cliffs, New Jersey, 1967. 146 pp.

BERRY, B.J.L., BARNUM, H.G. and TENNANT, R. Retail Location and Consumer Behaviour Papers and Proceedings, Regional Science Association Vol. 9, 1962. Pp. 65-102

BERRY, B.J.L. and HORTON, F.E. Geographical Perspectives on Urban Systems Prentice-Hall, Englewood Cliffs, New Jersey, 1970. 564 pp.

BEVIS, H. A Method for Predicting Urban Travel Patterns Journal of the American Institute of Planners Vol. 25, 1959. Pp. 87-90

BOAL, F. and JOHNSON, D.B. The Function of Retail and Service Establishments on Commercial Ribbons
The Canadian Geographer, Vol. 9, 1965. Pp. 154-169

Nondescript Streets
Traffic Quarterly, Vol. 22, 1968. Pp. 329-344

BOURNE, L.S. Internal Structure of the City
Oxford University Press, Toronto, 1971. 528 pp.

CANADA, DOMINION BUREAU OF STATISTICS Standard Industrial Classification Manual
Queen's Printer, Ottawa, 1960.

CARROTHERS, G. An Historical Review of Gravity and Potential Models of Human Interaction
Journal of the American Institute of Planners Vol. 22, 1956. Pp. 94-99

CAROL, H. The Hierarchy of Central Functions within the City Annals of the Association of American Geographers Vol. 50, 1960. Pp. 419-438

CHOW, N. The Evolution and Changing Functions of a Commercial Ribbon: A Case Study Unpublished M.A. Thesis, Department of Geography, University of Alberta, Edmonton, 1970. 165 pp.

CHAPIN, F.S. Urban Land Use Planning University of Illinois Press, Urbana, 1965. 498 pp.

CITY OF EDMONTON PLANNING DEPARTMENT General Plan Edmonton, August, 1967.

- Whyte Avenue District Plan - Commercial Study Edmonton, March, 1970. 48 pp.

- Commercial Strips in Edmonton - Issues and Opportunities Edmonton, February, 1973. 51 pp.

CLARK, W.A.V. Consumer Travel Patterns and the Concept of Range Annals of the Association of American Geographers Vol. 58, 1968. Pp. 386-96

CLARK, W.A.V. and RUSHTON, G. Models of Intra-urban Consumer Behaviour and their Implications for Central Place Theory Economic Geography, Vol. 46, 1970. Pp. 486-497

CLAUS, R.J. and HARDWICK, W. The Mobile Consumer Collier-Macmillan, Toronto, 1972. 242 pp.

CLAUS, R.J. and ROTHWELL, Four Sets of Variables in Retail Location Contemporary Geography Western Viewpoints University of British Columbia Geographical Series No. 12, Vancouver, 1971

CLAY, G. Finding Futures in the Highway Strip Landscape Architecture Vol. 64, 1973. Pp. 458-465.

COHEN, S. and LEWIS, G. Form and Function in the Geography of Retailing Economic Geography Vol. 43, 1967. Pp. 1-42

CONVERSE, P. New Laws of Retail Gravitation Journal of Marketing, Vol. 14, 1949. Pp. 379-384

COX, K. Man, Location and Behaviour: An Introduction to Human Geography Wiley and Sons, New York, 1972.

CURRY, L. The Geography of Service Centres Within Towns I.G.U. Symposium in Urban Geography, Series B, No. 24, Lund, Sweden, 1962. Pp. 31-54

DAVIS, D. Investigating a Business Ribbon in the Northern Municipalities, Capetown South African Geography Journal, 1960. Pp. 41-51

FAITHFUL, W. Ribbon Development in Australia Traffic Quarterly, Vol. 13, 1959. Pp. 34-54

FORBES, J. and ZIEMBA, W. Estimation of Supermarket Drawing Power: An Extension of Location Theory and Practice Annals of Regional Science, Vol. 5, 1971. Pp. 112-125

FOSTER, G. and NELSON, H. Ventura Boulevard: A String Type Shopping Street Real Estate Research Program, University of California, Los Angeles, 1958.

GARNER, B. Internal Structure of Retail Nucleations Northwestern University, Evanston, 1966.

GARRISON, W., BERRY, B.J.L., MARBLE, D., NYSTUEN, J., and MORRILL, R. Studies of Highway Development and Geographic Change University of Washington Press, Seattle, 1959.

GIST, R. Retailing: Concepts and Decisions
Wiley and Sons, New York, 1968. 534 pp.

GROTEWOLD, A. and L. Commercial Development on Highways in Urbanised Regions: A Case Study
Land Economics, Vol. 34, 1958. Pp. 236-244

HENDERSON'S CITY OF EDMONTON DIRECTORY
Henderson's Directories Alberta Ltd., Edmonton, 1968 and 1973

HORTON, F.E. Location Factors as Determinants of Consumer Attraction to Retail Firms
Annals to the Association of American Geographers Vol. 58, 1968. Pp. 787-801

HORTON, F.E. and REYNOLDS, D. Effects of Urban Spatial Structure on Individual Behaviour
Economic Geography, Vol. 47, 1970. Pp. 36-48

HOYT, H. Suburban Shopping Centre Effects on Highways and Parking
Traffic Quarterly, Vol. 10, 1956. Pp. 181-189

- The Effects of the Automobile on Patterns of Urban Growth
Traffic Quarterly, Vol. 17, 1963. Pp. 293-301

HUFF, D. A Probabilistic Analysis of Shopping Centre Trade Areas
Land Economics, Vol. 39, 1963. Pp. 81-90

- Defining and Estimating a Trading Area
Journal of Marketing, Vol. 28, 1964. Pp. 34-38

JOHNSON, D.B. A Functional Comparison of the Central Retail District with Two Regional Shopping Centres in Calgary, Alberta
Unpublished M.A. Thesis, Department of Geography, University of Alberta, Calgary, 1963. 112 pp.

JOHNSON, D.B. and CHOW, N. A Study of Commercial Blight and the Function of Whyte Avenue, Edmonton Department of Extension, University of Alberta, Edmonton, 1972. 49 pp.

JONES, D. and HAYNES, K. The Structure and Spacing of Intra-urban Retailing Annals of Regional Science, Vol. 6, 1972. Pp. 117-138

LEIGH, R. Specialty Retailing B. C. Geographical Series, No. 6, Tantalus, Vancouver, 1965.

MARTIN, S.P. Aspects of the Functional Relationship Between Consumers and Commercial Ribbons - A Pilot Study Unpublished Paper, Department of Geography, University of Alberta, 1974

MERRY, P. An Inquiry into the Nature and Function of a String Retail Development: A Case Study of East Colefax Avenue, Denver, Colorado. Unpublished PhD. Dissertation, Northwestern University, Evanston, 1955.

NATIONAL ECONOMIC DEVELOPMENT OFFICE Urban Models in Shopping Studies Report of the Economic Development Committee for the Distributive Trades, London, 1970. 125 pp.

PROUDFOOT, M. City Retail Structure Economic Geography, Vol. 13, 1937. Pp. 425-428

RATCLIFF, R. The Problem of Retail Site Selection Michigan Business Studies, Vol. 9, University of Michigan, Bureau of Business Research, Ann Arbor, 1939.

RHODES, T. and WHITTAKER, R. Forecasting Shopping Demand Journal of the Town Planning Institute, Vol. 53, 1967. Pp. 188-192

ROLPH, I. The Location Structure of Retail Trade
U.S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Domestic Series No. 8, U.S. Government Printing Office, Washington, 1933.

SCOTT, P. Geography and Retailing
Hutchinson University Press, London, 1973.

SIMMONS, J. The Changing Pattern of Retail Location
University of Chicago, Chicago, 1964.

STATISTICS CANADA Population and Housing Characteristics by Census Tracts, Edmonton
Queen's Printer, Ottawa, 1971.

VANCE, J.E. Emerging Patterns of Commercial Structure in American Cities
I.G.U. Symposium in Urban Geography, Lund Studies in Geography, Series B, No. 24, 1962. Pp. 485-518

VUORISTO, K. Highway-oriented Service Establishments on Route 5, Finland
Fennia 97, Helsinki, 1968. Pp.

WHEELER, J. Trip Purposes and Urban Activity Linkages
Annals of the Association of American Geographers Vol. 62, 1972. Pp. 641-654

WOLFE, R. Effects of Ribbon Developments on Traffic Flow
Traffic Quarterly, Vol. 18, 1964. Pp. 105-117

YEATES, M. and GARNER, B. The North American City
Harper and Row, New York, 1971. 536 pp.

APPENDIX A

CLASSIFICATION OF BUSINESS TYPES[1]

Food Group

Supermarkets
Bake shops
Candy and confectionery stores
Dairy products stores
Delicatessen stores
Food stores, grocery and meat markets
Fruit and vegetable markets
Meat markets
Food stores not elsewhere classified

General Merchandise Group

Department stores
General stores (variety stores)
Other general merchandise stores not elsewhere classified

Automobile Group

Automobile accessory, parts, tire and battery shops
Gasoline service stations
Car washing and polishing
Motor vehicle dealers (new and used)
Motor vehicle dealers (used only)
General auto repair
Other retailers of automotive products not elsewhere classified

Apparel and Accessories Group

Shoe stores
Men's clothing stores
Women's clothing stores
Family clothing stores

---

[1] Modified from Dominion Bureau of Statistics, Standard Industrial Classification Manual, Ottawa: Queen's Printer, 1960.

Apparel and Accessories Group, continued

Millinery shops
Other apparel and accessory shops not elsewhere classified

Hardware, Furniture and Household Appliances Group

Hardware stores
Paint, glass and wallpaper stores
Curtains and draperies
Floor coverings
Furniture stores
Household appliance stores
Radio and television stores
Second-hand furniture stores
Household furnishing stores not elsewhere classified
Radio, television and electrical appliance repair stores

Other Retail Stores

Drug stores
Book stores
Stationery stores
Florist's stores
Jewellry stores
Bicycle shops
Liquor stores
Tobacconists
Boats and marine supplies
Cameras and photographic supplies
Gift and novelty shops
Hobby shops
Luggage and leather goods stores
Music stores
Optical goods stores
Record stores
Sporting goods stores
Other retail stores not elsewhere classified

Finance Group

Banks
Finance and loan companies
Mortgage companies
Trust companies
Savings and credit institutions
Investment and security companies
Insurance agents and companies

Finance Group, continued

Real estate operators
Other financial, insurance and real estate services not elsewhere classified

Community Services

Commercial and business schools
Hospitals
Offices of physicians
Offices of dentists
Offices of chiropractors
Other health services not elsewhere classified
Religious organizations
Motion picture theatres
Bowling alleys and billiard parlours
Other recreational facilities not elsewhere classified

Personal Services

Shoe repair shops
Barber shops
Beauty shops
Cleaning and laundering services
Restaurants
Restaurants, drive-in
Hotels
Dressmaking
Other personal services not elsewhere classified

Services to Business Group

Accountancy services
Advertising services
Engineering and scientific services
Legal services
Blueprinting and duplicating services
Other business services not elsewhere classified

Miscellaneous Services Group

Photography
Repair shops not elsewhere classified
Services to buildings and dwellings
Equipment rentals
Miscellaneous services not elsewhere classified

APPENDIX B

Consumer Interview Survey

Time
Place
Interviewer

1. How often do you shop at Whyte Avenue?

- Less than once a week ( )
- Once a week ( )
- Twice a week ( )
- More than twice a week ( )

2. If you often shop at Whyte Avenue, how many shops do you usually visit?

- One ( )
- Two ( )
- Three ( )
- More than three ( )

3. If you do not shop at Whyte Avenue very often, do you ever make a special trip here for particular items?

- Yes ( )
- No ( )

If yes, which items.....
.....
Which shops do you visit?
.....

4. How often would you make such a special trip to Whyte Avenue?

- Less than once a week ( )
- Once a week ( )
- Twice a week ( )
- More than twice a week ( )

5. Where did you begin this particular trip, from home or work?

- Home ( )
- Work ( )

What is your address for
Home.....
Work.....

6. How did you get from there to this store?

- Car driver ( )
- Car passenger ( )
- Taxi ( )
- Bus ( )
- Walk ( )

7. Where are you going after this shopping trip?

.....

8. If you set out from here on a shopping trip to downtown and you have to cross Whyte Avenue, do you ever decide to shop at Whyte Avenue instead?

- Yes ( )
- No ( )

If yes, how often?
.....

9. Is there any particular section or part of shops along Whyte Avenue that you visit more than others? (Eg. Jasper Ave., between 105 and 109 Streets).

- Yes ( )
- No ( )

If yes, where?
.....
.....

10. Is there any reason why you visit this particular section of Whyte Avenue more than others?

- Yes ( )
- No ( )

If yes, what reason?
- Close to home ( )
- Shopping facilities external ( )
- Parking facilities ( )
- Other ( )

11. If you visit a number of establishments along Whyte Avenue, how do you get from one to another?

- Walk ( )
- Drive car ( )
- Taxi ( )
- Bus ( )

12. If you travel by car to Whyte Avenue to shop for any reason, where do you try to park?

As close as possible to the shop you wish to visit ( )
Any place along Whyte Ave. ( )
Side of road and away ( )
Anywhere you can ( )